



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

B

1,035,904



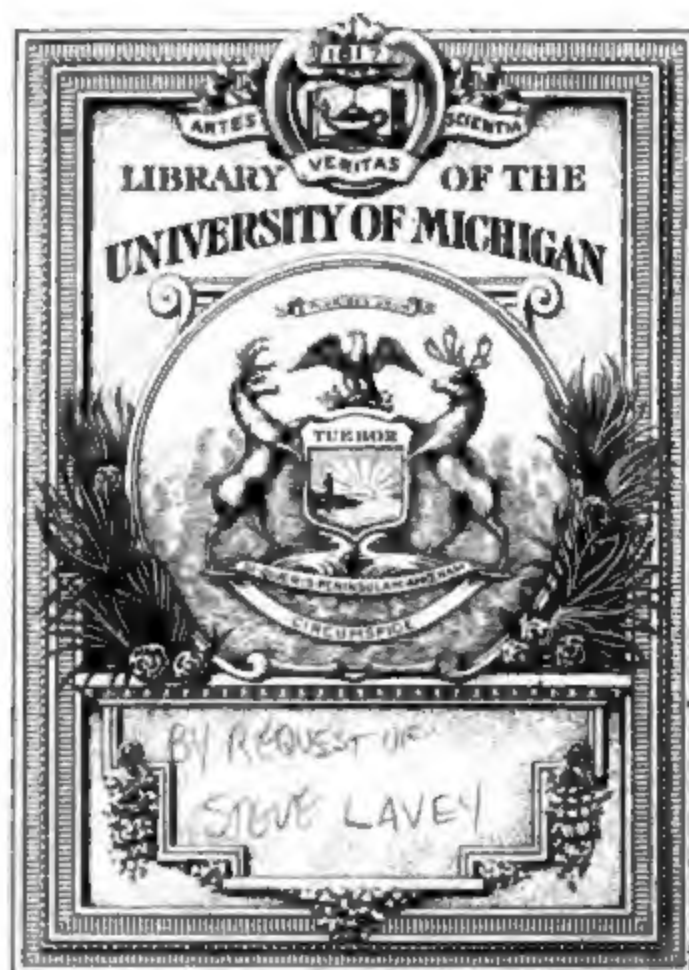
Our Railways

FROM ORIGIN

DEVELOPMENT

INFLUENCE & ROMANCE

J. FEMPLETON



HE

3018

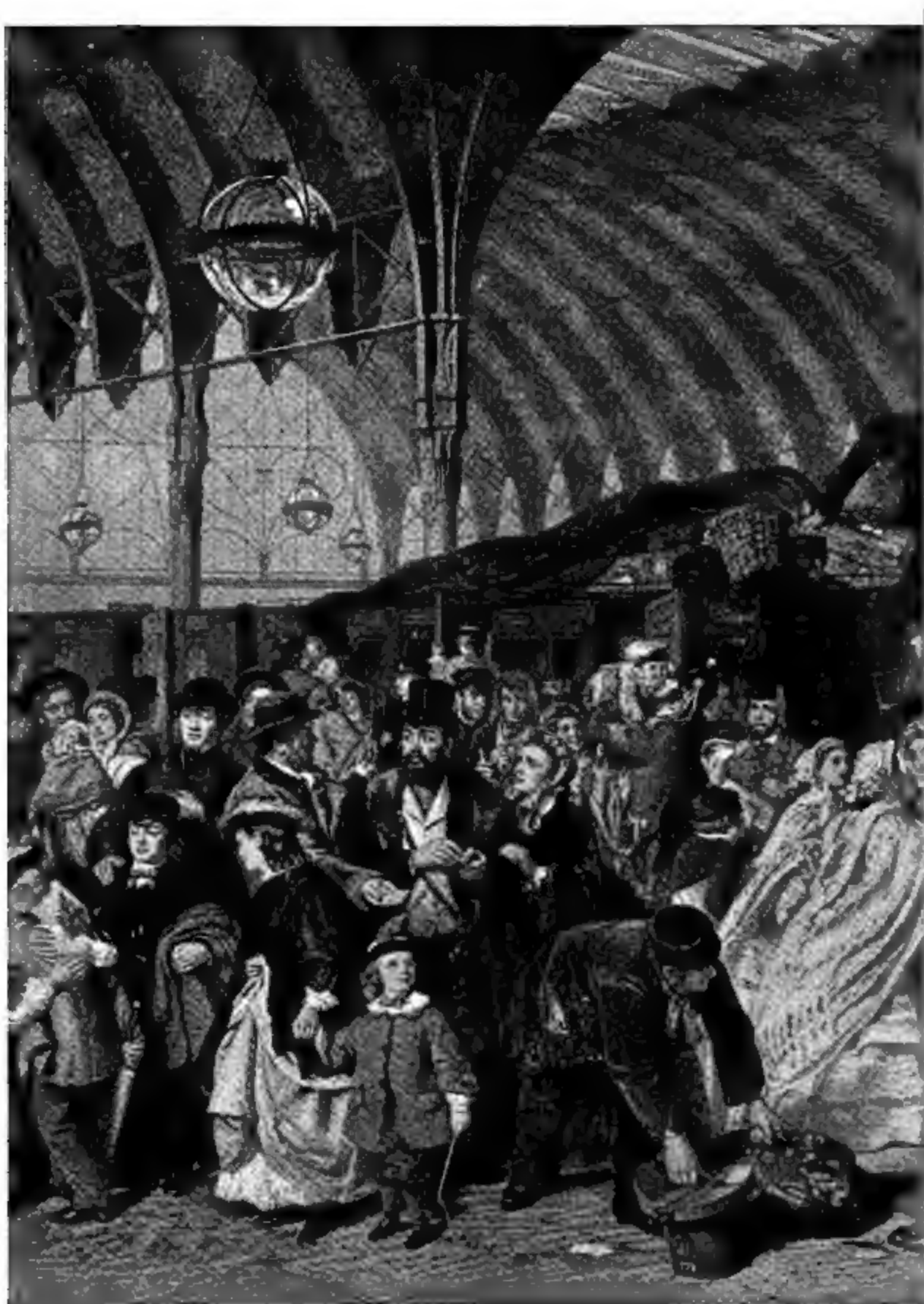
P37

1896

OUR RAILWAYS







"THE RAILWAY STATION," By W. P. Frith, R.A.

from the Engraving Published by Messrs. Henry Graves and Co., Pall Mall, S.W.)



OUR RAILWAYS

THEIR ORIGIN, DEVELOPMENT, INCIDENT
AND ROMANCE.

BY

JOHN PENDLETON

*Author of "A History of Derbyshire," "Newspaper Reporting in Olden Time
and To-day," &c.*

IN TWO VOLUMES

VOLUME I

CASSELL AND COMPANY, LIMITED

LONDON, PARIS & MELBOURNE

1896

ALL RIGHTS RESERVED



Q 11 12-17217

Revised 2-27-30 A.V.M.

"He cannot be a perfect man
Not being tried and tutor'd in the world:
Experience is by industry achieved,
And perfected by the swift course of time."

Two Gentlemen of Verona.

PREFACE.

THERE are many admirable books on railways, but in this work the first attempt is made to tell the story of the inception and extension of all our great lines and the incident that crowds them. To describe thoroughly the construction and development of the vast and intricate system of railways that spreads over the land would be a man's life-task; but the author has endeavoured to indicate where these tracks go, what they have cost, their service to trade, whom they carry, and the wondrous variety of event and circumstance, of work, endurance, humour, dilemma, and heroic deed inseparable from railway travel.

If one is careful not to lose oneself in a maze of figures, there is no subject more interesting than that of "Our Railways." In some sense it shapes itself into a history of the country during the period through which the locomotive has sped; and the history is so thronged with adventure that fiction looks tame beside it. The subject is as fascinating

as it is inexhaustible ; for there is no phase of it, from the pant and wail of Trevithick's engine on the road, to the boring of the Severn Tunnel, the building of the Forth Bridge, and the running of the dining-car train, that fails to tell of success following earnest striving. It includes not only the frolics of the early locomotive, the triumph of steam, the indignation of the landowner, the risk of huge capital, the gambler's clutch at wealth, the navy's indomitable digging, and the engineer's achievement, but also the transition from rude and expensive to luxurious and cheaper journeying.

England is not indebted to "Our Railways" for everything ; but they have done much towards making the country earnest, methodical, and prosperous. In the first part of the century the people were rusting with slow movement or no movement at all, with the isolation of city from city, and village from village, and with the monotony both of employment and of leisure. Now they do not linger so long by their own hearth, or scratch their heads in perplexity how to pass the time. They are active and enterprising with quick locomotion and wider association. Everybody grumbles at the railways—they are the scorn of the punctual, the embarrassment of the tardy, and the

contempt of the irascible ; but they have one great distinction—they have shaken us up.

How we have advantaged or suffered by the process it is the purpose of this work to show. It deals with the difficulties and the vicissitudes of the makers of railways ; it points out that regular and rapid transit has encouraged industry and fostered commerce ; it speaks of the train as a vehicle to business, and as a conveyer of mankind to health resort and to remote places that yield no chief rent but retain their natural beauty unsullied by the greed of gain. It sketches the romance, the pathos, the crime of travel ; it tells of weird accident and piteous disaster ; it mentions the toil and daring of the railway servant ; and it brings the record of the line down to the present day, a record of splendid endeavour and of duty done that has hardly a parallel in the world's history.

The author has had the help of many railway men in the preparation of this book, and he tenders his heartiest thanks to them ; but he feels particularly indebted to Mr. G. H. Turner, the General Manager of the Midland Railway, and his staff for the information they have, with unvarying courtesy, obtained for him. Mr. F. W. Webb, the London and North-Western locomotive superintendent, Mr. William Dean,

the Great Western locomotive superintendent, and Mr. H. S. Marks, secretary of the Pullman Car Company (Limited), have also been of great service, in providing material for illustrations, as well as in other ways. Most of the old views of railway stations and railway scenes in the work have been reproduced from the early numbers of the *Illustrated London News*; and these quaint pictures give a more vivid idea than could any pen of the evolution of our modes of locomotion, at the same time that they illustrate English manners in the early days of the Queen's reign.

J. P.

CONTENTS.

	PAGE
INTRODUCTION	1

CHAPTER I.

THE DAYS OF THE COACHES.

A Dismal Junction—Wet Shunting—The Line Cleared for the Express—Where the Train Goes and Whom it Carries—A Picture of Human Life—The Rapid Growth of Railways—Old English Roads—The Pack-horse, the Carrier's Cart, and the Stage-coach—A Quaint Advertisement of Travel—Leisurely Journeys—The Pit Tramway—An Inventor in a Madhouse—Freaks of Genius—The First Locomotive—George Stephenson's Early Work and Struggling—A Shrewd Prophecy—Hustled off the Road . . .	12
--	----

CHAPTER II.

THE FIRST RAILWAY.

A Remarkable Railway Servant—Some Erratic Locomotives—A Day-light Line—The Quaker and Coming Fortune—Opening of the Stockton and Darlington Railway—George Stephenson as an Engine-Driver—Comical Trains—Novel Mode of Travel—Old Time Railway Carriages—What the First Railway Did—A Busy Northern City—Trade and Traffic in Manchester—The Railway to Liverpool—A Righteous Horror of Sunday Trains—Whimsical Prejudices against Railway-Making—Extraordinary Predictions—The Story of Chat Moss	29
--	----

CHAPTER III.

REMARKABLE LOCOMOTIVES.

By Rail from Manchester to the Sea—The Liverpool Merchant's Rash Vow—A Crop of New Projects—Horse-Power and Steam—A Grotesque but Significant Race—Success of the "Rocket"—Huskisson's Death—A Procession of Locomotives—Primitive Railway	
--	--

Carriages and Exciting Journeys—A Family Coach Left in a Tunnel—The Romance of the Line—A Murderer's Leap from an Express: Dramatic Struggle, Escape, and Re-capture—Novel Experiences of Travellers—An Actress on an Engine Footplate—Helping the Driver of the Night Mail—A Considerate Rebuff—"Two's Company; Three's None"	51
--	----

CHAPTER IV.

RAILWAY SURVEYORS AND THEIR ADVENTURES.

Humorous Scene at St. Helens—More Railway Enterprise—The Chain-Bearer's Retort—The Track Towards London—An Obliging Train—Surveying the First Line to Town—A Countess and Her Prejudice Against Railways—What would Become of Mansions and Parks—The Unlucky Fate of Canals—The Gloom and Mystery of Tunnels—Sir Edward Watkin and Woodhead Tunnel—The Effect of Tunnel-Air on the Passengers' Health—A Scientific Railway Ride—Adventures of Railway Surveyors—The London and Birmingham Line—Peers and Profit—A Town's "Barbarous Fury"—The Perils of Tunnel-Making—A Brave Engineer—How To Go Through a Tunnel—A Costly Railway	69
--	----

CHAPTER V.

"THE QUEEN ON HER TRAVELS."

Dr. Arnold's Opinion of Railways—The "Iron Duke" Distrusts the "Iron Horse"—Her Majesty's First Journey by Rail—How Emperors Travel—Something Like a Gift—A Quick Change of Apparel—The "Queen's Train"—A Royal Visit to Derby—Her Majesty's Anxiety for the Safety of Passengers—Precautions Down the Line for the "Queen's Coming!"—Banks, the Signaller—The Royal Train to Scotland—One Hundred Journeys with the Queen—A Sad Railway Ride—Her Majesty on the Continent—A Czar's Risks in Travelling—Louis Philippe's Preference for the Stage Coach—The Train Disaster at Versailles—Sidney Smith's Sardonic Letter on Railways	89
---	----

CHAPTER VI.

THE LONDON AND NORTH-WESTERN—THE NAVY AND THE TELEGRAPH.

Quicker Mails—Thomas Brassey, the Railway Contractor—The Navy: His Nicknames, Attire, Work, and Love of Fight—A Revolting	
---	--

CONTENTS.

xiii

PAGE

Crime—The Navy's Coolness in Danger—His Thrift—The Beginning of the London and North-Western Railway—The First Train Through Crewe—The Electric Telegraph—The News it Flashes—What the Telegraph Does for Railways—The Whispering Gallery of the Line—Broken-down Wires—A Railway Town—Washing at Wolverton—The Whims of a Ghost—Generous Shareholders . . .	109
--	-----

CHAPTER VII.

THE DEVELOPMENT OF A GREAT RAILWAY.

The London and North-Western—Working Trains by a Rope at Euston—A "Fine Doric Portico"—An Ancient Roadway—The Line Twenty Years Ago—A Nice Income—The Modern Love of Change and Recreation—Old-Fashioned Notions of Business and Leisure—Privileges to Workpeople—Cheap Travel—Playing a Waiting Game—Plain Mr. Moon—His Characteristics and Policy—"Lord! There's Our Sam"—A Clerk's "Heinous Crime"—Reproving a Director—How a Railway is Managed—The Handling of Goods Traffic—Sending Cotton to China—Bringing Wool to Yorkshire—Loading and Unloading at a Noted London Dépôt—A Silent Figure in a Busy Scene—An Irish Giant—The Traffic at Holyhead—London's Appetite	126
---	-----

CHAPTER VIII.

THE "ROYAL MAIL" LINE.

Eccentric Passengers on the London and North-Western: Irish Harvestmen and Their Ways—An Incident on the Dublin Boat—The Family Man and His Seaside Holiday—How to Avoid Worry—Collection of Luggage by Van and Dray—The Railway Guard and the Distance he Travels—A Picturesque Figure—The Frenchman and the "Maréchal"—The Guard of the Mail from the North—A Manchester Station at Night—Seeing the Last Train Out—What a Locomotive Can Do—An Imposing Crest—Letters "Franked" and Despatched Half a Century Ago—The Railway the Real Postman—A New Line on the Derbyshire Border—Buxton and the River Dove—Forged Transfers—A Satisfactory Dividend—Sir George Findlay—The Lancashire and Yorkshire Railway—Its Position and Prospects	144
---	-----

CHAPTER IX.

THE "PIONEER RAILWAY."

PAGE

The "Pioneer Railway"—What Came of a Beefsteak Dinner—The Midland Counties Railway—Working Against Time—The First Train Out of Nottingham—Railway Enterprise Northward—A Foe to Railway Engineers—The Roundabout Line to Sheffield—The Old Station in the Wicker—Feud of Canal and Rail—An Emperor as a Railway Maker—Opening of the North Midland Line—Luncheon and Music on a Station Platform—How the Shareholders Go to Derby To-day—What is Done at the Midland Meeting—The Troubles of Pressmen—Some Exciting Meetings and Familiar Figures—Free Passes and a Small Time-Table—The Creation of the Midland Company—The Gauge Fight . . .	169
--	-----

CHAPTER X.

THE "RAILWAY KING" AND HIS DETHRONEMENT.

The English "Railway King"—A Stockbroker's Office—Queer Shareholders—A Butler's Good Fortune—"Jeames" and His Wealth—Tempting Dividends—Hopes and Fears in the Railway Mania—Absurd Projects—The Greed of Gold and the Disaster it Brought—George Hudson's Climb to Fame—An Election and a Quick Train Ride—Hero-Worship, Rumour, Distrust, Caricature, and Law—The Downfall of the Monarch of the Line—His Life on the Continent—Clinging to the Memory of Greatness—Poverty and Death	190
---	-----

CHAPTER XI.

THE YOUTHFUL STRUGGLES OF THE MIDLAND—BIRTH OF THE EXCURSION SYSTEM.

Railway Beginnings in Leicestershire—The Voice of the Steam Whistle—Metal Railway Tickets—The Old and the New Ticket Collector—The High Peak Line—Dawn of the Excursion Era—The Tripper and What he Can Do in a Day—Thomas Cook's First Excursion Train—The Advent of the Great Northern—The Two Georges: Some of Stephenson's Characteristics—Dark Days for the Midland—The Great Exhibition—Fierce Competition—To London and Back for Five Shillings—Stagnation of Other Traffic—Seizing an Enemy's Locomotive—An Invulnerable Train . . .	207
--	-----

CONTENTS.

xv

CHAPTER XII.

FORCING THE RAILWAY INTO ST. PANCRAS.

	PAGE
A Remarkable Procession of Trains—The Bold Policy of the Midland—Forcing a Way Into St. Pancras—London by Night—The Underground City—Some Lowly and Lonely Stations—The Size and Beauty of "Pancras"—Sir Gilbert Scott and the Midland Hotel—The Main Line Through a Graveyard—A Startling Guest at a Wedding Feast—Derby and its Development—The County Town in Olden Time—The Railway Works and Their Influence—The Midland South-Westward—A Chat About Birmingham—The Electric Light and Railway Toil—Purer Atmosphere and Health—A Great Railway Station	226

CHAPTER XIII.

THROUGH THE PEAK TO THE MERSEY.

The Rough Land of the Peak—Singular Engineering Projects—Dukes and Railways—The Tunnel Beneath Haddon—Through Derbyshire Dales—What Mr. Ruskin Thinks—From Factory to Field—Some Big Viaducts—A Pretty Land—Working Towards the Warehouse City—Gouty Travellers—How Streams Hide—Difficulties at Dove Holes—The Cottager and the Landslip—The Midland at Manchester—The Central and Other Stations—A Coming Improvement—The Run to Liverpool—Emigrants and the Cholera—The Overhead Line—The Railway Under the River—A Strange Variety of Passengers—The Ship Canal and Mersey Trade	246
--	-----

CHAPTER XIV.

THE SETTLE AND CARLISLE TRACK.

A Remote Country-side—By Rail to Bolsover and Hardwick—A Business Woman—An Old Coaching-Town—"Screeching Fiends" Called Locomotives—Railway Enterprise at Chesterfield—The Dore and Chinley Line—The Midland at Sheffield—Whither the Track Stretches—A Central Station for Sheffield—The Line Through Yorkshire—Leeds and Bradford—Saltaire in Prosperity and in Adversity—On the Way to Carlisle—A Costly Grasp at Scotch Traffic—Struggling Through Moorland—Snowed Up—A House on Wheels—The Navy's Town on the Moss—Viaduct and Tunnel in a Wild Land—An Awkward Condition—A Big Carrier	271
--	-----

CHAPTER XV.

THE GREAT NORTHERN.

PAGE

- A** Powerful Company in a Fertile Land—King's Cross—How the Terminus Obtained its Name—Trudging on the Highway—Nature and Extent of Great Northern Traffic—The Season-Ticket Holder and His Ways—By Express to York—In the Brake Van of the "Flying Scotsman"—Pillows for Passengers—Two Notable Events—A Fast Run to Town—Doncaster on the St. Leger Day—A Crowd of Trains and a Mass of People—How the Multitude are Conveyed Home Again—Some Racing Memories—Where the Great Northern Engines are Built—London's Milk Supply—Old Railway Enmity—Fighting the Midland—The Sheffield Company and the Great Northern—A New Agreement—The Eve of Another Conflict . 296

CHAPTER XVI.

THE NORTH-EASTERN.

- The Size of the System—Where the Line Extends—Mr. Henry Tennant—Reckless Competition—Invasion and Monopoly—The Hull and Barnsley Railway and "Uncle Remus"—The Acquisition of Docks—Railway Extension at Leeds—Life at York Station—Prelates in the Cathedral City—Bishops as Passengers—Episcopal Wit—The Bishop of Ripon on Railway Management—Yorkshire Magistrates and North-Eastern Trains—Greyhounds of the Line—Charles Sacré and His Delight in Quick Travel—Some Famous Engines—A Disastrous Labour Struggle—Railway Losses through Strikes—Snowstorms—Some Exciting Incidents—A Novel but Serious Collision—The Company and their Servants 320

CHAPTER XVII.

THE MANCHESTER, SHEFFIELD AND LINCOLNSHIRE RAILWAY.

- The Sheffield Railway—The First Stride—Line-Making in Troublous Times—A Track that Stretches Across England—The Sedan Chair—Through the Peak Fifty Years Since—Robbery from a Stage-Coach—Railway and Tramway—Quick Trains from Town—Grimsby—Its Docks and Shipping—A Great Fish Mart—The Skipper's Little Exaggeration—"Not a Rich Company"—A Busy Man—The New Line to London—The Storm the Project Raised—Despairing Painters and Indignant Cricketers—The Menace to

CONTENTS.

xvii

	PAGE
Lord's—A Famous Ground—Withdrawal of the Great Northern Opposition—Artistic Objections to the Line—The Bill through Parliament—The Track Open at Both Ends—Railway Enterprise in the Wirral Peninsula—Mr. Gladstone on Old and New Travel	344

CHAPTER XVIII.

THE GREAT EASTERN—THE WORKMAN'S RAILWAY FRIEND.

"Bradshaw's Railway Manual"—The Eastern Counties Line—A Scape- goat Company—A Passenger's Whimsical Cartoons—Lord Salisbury as a Railway Chairman—Some Notable Engines—The Cross-Country Railway—Cutting the First Sod—A Lady's Speech—The Prospects of Traffic—Rolling-Stock Seized for Debt—A Tempting Prospectus —An Obliging Railway—The Rapid Progress of the Great Eastern —Third-class Dining Cars—A Comprehensive Trade—Workmen's Trains—Talk in the House—A Cheap Ride—Speeding Over the Sea —A Crowded Railway Station	375
--	-----

CHAPTER XIX.

THE GREAT WESTERN—END OF THE BROAD GAUGE.

The Great Western Track—The Expansion of Paddington—A Big System —Coal at Cardiff—Passenger Traffic—A Very Respectable Railway— Stately Travelling—A Hasty Engine-Driver—The "Cornishman"— Sleeping Cars—Spring Flowers in Great Cities—A Delightful Land —Tons of Narcissi for Covent Garden—An Island Paradise—Brunel as an Engineer and an Acrobat—A Remarkable Man—Some of his Viaducts—The First Atlantic Steamship—On Board the <i>Great Eastern</i> —A Humble Hero—The Cable to Heart's Content—Rails of Wood and Rails of Steel—Bidding Adieu to the Broad Gauge— Quick Railway Work—Narrowing the Road—Incidents of the Con- version—The Cost and the Advantage—Promised Improvements .	398
---	-----

CHAPTER XX.

THE LONDON AND SOUTH-WESTERN.

A Contrivance to Prevent Sea-Sickness—The English Climate—How the London and South-Western Railway has Extended—Pushing into the City—Increasing Traffic—A Curious Bazaar—Waterloo Station and the Gigantic Signal Box—Coming Up the Solent— Southampton Docks—American Mails and English Liners—"Hail Columbia" and "The Star-Spangled Banner"—Competition— Results of the Company's Maritime Policy	431
---	-----

CHAPTER XXL

THE SOUTH-EASTERN—THE LONDON CHATHAM AND DOVER.

PAGE

The South-Eastern—Fertile Kent—A Train of Hop-Pickers—Heads Out of Carriage Windows—Dear Land—Curious Effect of a Railway Journey—Quick Running to the Coast—The Club Train—Crossing the Channel—The Indian Mail—Dover and the New Harbour—The Channel Tunnel—A Long Ride—Great Bridges—At Sea at Night—Digging for Coal—The London and Chatham—Modern Development of Traffic—Early Embarrassments—Trade Prosperity Twenty Years Ago—Lordly Miners—A Bold Policy—The Prospects of Amalgamation—What May Happen After All . 446

CHAPTER XXII.

THE LONDON, BRIGHTON AND SOUTH COAST.

London and Brighton—On King's Road—By Rail to Town—By Coach to the Sea—"Jockey of Norfolk's" Tipsy Drive—A Throng of Passengers—English Work in Iron—The House Fires of the North—A Cold Day at Brighton—The Exasperated Waiter—The Fight to Make the Railway—"A Forensic Lion"—A Tilt at George Stephenson—"The Derby"—Middle-Class Thrift—London and Paris—Some Things that Come from France—Drivers and Travellers—Railway Punctuality—Criticism of Train Speed—"What is Wanted is 'The Man'"—Doing Pretty Well . . . 473

CHAPTER XXIII.

THE CROWD AND LIFE OF LONDON.

London and Her Traffic—A Maze of Railways—Workers and Travellers in the Night—Fleet Street Towards Dawn—The Rush to Catch the Newspaper Trains—Railway Help to the Postal Service—The Parcel Post—An Enormous Appetite for Packages—Waiting for the Postman—What He will Bring—The Down Night Mail on Christmas Eve—Hard Work in the Sorting Van—A Startling Game at Pitch and Toss: Flinging Out the Mails—Working Under London—Electric Railways and City Traffic—Schemes for the Future . . . 491

CONTENTS.

xix

CHAPTER XXIV.

OVER THE BORDER.

	PAGE
Scotland—The Best Way Out—Three Roads In—Railway Struggling Over the Border—The Highland—A Track Across Culloden Moor—The Late Duke of Sutherland as an Engine-Driver—A "Real Dook!"—His Railway Enterprise—The Great North of Scotland—Former Contempt for Passengers—The Caledonian—Excursions on a Fast Day—The North British—Their Fight with the Caledonian—A Peace Agreement—Some Results of the Truce—The West Highland Railway—The Glasgow and South-Western—Two Small Lines in the South-West—Possible Amalgamation . . .	527

LIST OF ILLUSTRATIONS.

	PAGE
A Stage-Coach <i>En Route</i>	5
A London and North-Western Express Passing Harrow	8
The "Greater Britain"	9
Interior of a Signal-Box	11
A Mail-Coach Starting	19
George Stephenson	25
Hedley's "Puffing Billy"	31
The "Experiment"	36
Fac-simile (Reduced) of an Advertisement of the "Experiment"	37
Hackworth's "Sanspareil"	54
The "Rocket"	55
Mr. Huskisson	57
On an Engine	65
Statuette of Vignoles	71
Interior of a Tunnel	85
The Queen's Saloon	89
The Royal Train in 1843—London and Birmingham Railway	91
Interior of the Queen's Saloon	96
Interior of the Royal Carriage in 1843—London and Birmingham Railway	97
Arrival of the Funeral Train at Windsor	105
Thomas Brassey	110
Navvies at Work	113
Telegraph Clerks at Work	117
The First Telegraph Station at Slough	119
Portico of Euston Station	128
Sir Richard Moon	135
Sir George Findlay	141
Hooking on the Mails	151
Interior of a Mail Carriage	152
Arms of the Midland and London and North-Western Companies	154
Sir James Allport	160

	PAGE
Iron Railway Viaduct at Manchester in 1851	165
Old Derby Station	170
The Present Derby Station	171
Old Nottingham Station	175
The Old Wicker Station, Sheffield	179
Sir E. Baines	184
Changing from Broad to Narrow Gauge at Gloucester	185
Deposit of Railway Plans with the Board of Trade in 1845	192
George Hudson	197
The "Railway King" Attending the Queen into a Carriage	201
Bernal Osborne	202
Fac-simile of Hudson's Autograph	206
A Ticket of 1845	208
Date-Printing Machine for Tickets in 1845	209
Thomas Cook	215
Tapton House, Chesterfield	219
Armour-Clad Train in the Egyptian War	224
Bronze Ticket of the Leicester and Swannington Line	225
St. Pancras	233
Old St. Pancras Church in 1820	237
New Street Station, Birmingham	243
Haddon Hall	248
Sir Andrew Fairbairn	261
Swing Bridge on the Overhead Railway over the entrance to Stanley Dock, Liverpool, with Ordinary Road Bridge	265
Hardwick Hall	272
Saltaire	281
Sir Titus Salt	286
Settle	289
Demolishing King's Cross	297
King's Cross: Departure of the Scotch Express	304
The Great Northern Mail	308
Third-class to Scotland by the Great Northern—As it Used to Be	316
Queen's Dock, Hull	321
The Station Hotel, York	329
York Station	333
The Latest Type of North-Eastern Engine	336
A Passenger Engine by Stephenson (1831)	337
Great Grimsby	352
Sir E. Watkin, Bart., M.P., in his Room	361
Swing Bridge over the Dee at Hawarden	368

LIST OF ILLUSTRATIONS.

xi

	PAGE
A Railway Cartoon	377
A Third-class Dining Car (Midland)	384
Harwich	392
Paddington Station in 1845	399
A Great Western Engine with Domed Fire-box (1838)	400
The Down Dutchman (on the right) Passing Acton	405
Isambard Kingdom Brunel	409
The Maidenhead Railway Bridge	412
Sir Daniel Gooch	414
The Last Broad Gauge Train Leaving Paddington	417
Fifteen Miles of Sidings at Swindon	422
Putting Narrow-Gauge Wheels on a Converted Engine	425
Bath Station in 1845	428
Southampton	431
Plan of Waterloo	434
Waterloo Station in 1848	435
Sir Charles Scotter	405
Arrival of the First American Liner (the <i>New York</i>) in Southampton	
Water	442
Charing Cross Station	448
The First South-Eastern Train to Canterbury (1846)	450
Arrival of the Indian Mail at Folkestone (1846): Express Omnibus	
Proceeding to Receive It	457
Sir Benjamin Baker	459
On the Tram-car in the Channel Tunnel	464
The Viaduct Across Preston Road, Brighton, in 1846	477
The Steamship <i>Paris</i> Leaving Newhaven	482
The Great Ouse Viaduct (London and Brighton Line) in 1844	483
Railway Drawbridge over the Arun (Brighton and Chichester Line) in 1846	488
The Brighton Terminus in 1844	489
Map of the London Railways	493
Mr. W. H. Smith	498
The Newspaper Train at Euston on Saturday Morning	501
First Despatch of Mail-bags through the Pneumatic Tube from Eversholt Street to Euston Station	507
"Pick-up" Water Troughs at Whitmore, between Crewe and Stafford	511
Trial Trip on the Metropolitan Railway in September, 1862: Passing Portland Road Station	514
The Banquet in Farringdon Street Station at the Opening of the Metropolitan Railway	517

	PAGE
An Electric Railway Station	518
Map of the Electric Railway	519
An Electric Train	521
Section of Tunnel between the "City" and "Elephant and Castle" Stations	524
Longitudinal Section of Locomotive on the City and South London Railway	525
Interior of an Electric Car	526
Map Showing the Connections of the Forth and Tay Bridges	528
Perth, from the Station	531
The Late Duke of Sutherland	535
Beginning of the Great North of Scotland Railway at Westhall, Aberdeenshire, in 1852	537
Opening of the Duke of Sutherland's Railway to Helmsdale in 1870	540
The Central Station, Glasgow	543
The Marquis of Tweeddale	545
Princes Street Station (Caledonian Company), Edinburgh	551
Mr. J. Conacher	552
The Comet	555
The "Dunrobin" with the Duke of Sutherland on the Footplate	556

LIST OF PLATES.

	TO FACE PAGE
"THE RAILWAY STATION," by W. P. Frith, R.A. ... Frontispiece	
EUSTON STATION: THE ENTRANCE HALL, SHOWING GEORGE STEPHENSON'S STATUE	126
VIEW OF HOLYHEAD, SHOWING THE RAILWAY	142
INTERIOR OF ST. PANCRAS	228
THE MANCHESTER SHIP CANAL, ABOVE EASTHAM	268
THE GREAT NORTHERN WORKS AT DONCASTER	312
PLAN OF SOUTHAMPTON DOCKS	440
"BEAK" ENGINE IN USE ON THE PARIS, LYONS, AND MEDITERRANEAN RAILWAY... ..	460
A HIGHLAND RAILWAY EXPRESS ENGINE	532

OUR RAILWAYS.



INTRODUCTION.

It is the proud but whimsical boast of one of our statesmen that he never takes physical exercise ; yet in every form of life there is fascination in movement and in change. Nature is always busy, whether engaged in providing breakfast for the tiniest insect or in the crash of storm. Man must move to continue his being, unless he has been “born with a silver spoon in his mouth ;” and even then the activity is undertaken by the heads, the shoulders, and the legs of others. They move at his behest. He who crowds his days with useful work lives well. He may leave his purpose unfinished ; but his life, filled with earnest endeavour, stands out in bracing contrast to that of the idler, who simmers from birth till death, too listless to think why he exists, and of less account than a scarecrow in a farmer’s field.

The love of movement is as old as the world itself. In the Biblical days the strong man rejoiced, like the classical beauty Atalanta, to run a race ; and he is as eager now, whether on running track or in football field. During the past twenty years the English devotion to physical exercise has become a religion. The

leisure of "young men and maidens" is sacred to open-air pastime, from cricket to lacrosse, and from lawn-tennis to boating; and mingling with the healthy delight that these outdoor pursuits of vigour and pleasure bring is the desire to go further afield. Our national creed that "There is no place like home" is a paradox. Nearly every family is prepared at a moment's notice, notwithstanding the housewife's protest that "there is nothing ready, and nothing to wear," to hurry away from the hearth, tiled or pipe-clayed, to lodgings by beach or in woodland, where the scenery may be picturesque but the bed is hard. In fact, parents have only to drop the merest suspicion of a hint about the apartments at the seaside, or the furnished cottage by the lake, and the children go wild with glee, and with busy brains and sparkling eyes make their daring plans.

The preacher is fond of telling us that life is only a journey; but it is a much longer and more delightful one than it was in the days when the Queen of Sheba came over the glowing sand, with her camel-train and her wealth of gold and perfumes and spices, to visit King Solomon. Travel, it is true, is in some lands still a comedy, a torture, or a danger. Commander Cameron, when lame with tramping through Africa, found the easiest vehicle a hammock slung across the shoulders of two natives; but King Katchiba, the sorcerer-monarch in the same land, journeyed more grotesquely, riding pick-a-back, preceded by a gigantic warrior, and followed by one of his prettiest and most obedient

wives, who, ignorant of the rights of woman, esteemed it an honour to trail miles through the forest-land at the heels of his majesty, carrying on her head a great bottle of water with which to assuage his thirst.

Blarney has survived centuries of wrong; and there is rollicking fun, as diverting as Charles Lever's, in the horse that pulls and in Mick that drives the Irish jaunting-car. The diligence in Spain and the bullock-waggon in Pretoria rival one another in the marvellous science of jolting, and lend themselves to torture and cursing. Sledge-riding, through the snowy waste to Khiva, with the wolves on your track, or swaying in howdah, on elephant's back, through Indian jungle, by tigers' lair, is not devoid of peril; but probably neither of these experiences of locomotion exceeds in incident and excitement the first ride in the first chariot made by Erichthonius of Athens, in 1486 B.C. A ride on the footplate of an express engine makes your frame shake; but the bump, the bang, the lurch of the Greek chariot would have outwitted the London costermonger's art of balancing, and dislocated and bruised him, though, as he bit the dust by the Senate-house, he would no doubt have contemptuously discovered that the classic language of the country was bald and feeble in comparison with his own vernacular.

The chariot was, however, improved in form and appointment. The vehicle used later by the Athenian coxcomb as he dashed by in his bright tunic to join in the race, or by the Roman patrician, in rich toga, driving at more stately pace to call upon the tribune, or

to show himself at festival, was neither rude nor uncouth. It was made indeed into a comfortable conveyance; or it would have been impossible, as is mentioned in the Acts, for the Ethiopian officer in the service of Queen Candace to have returned from worship at Jerusalem "sitting in his chariot reading Esaias the prophet." The chariot became indispensable to the wealthy on the northern shore of the Mediterranean. It was used in sport, in love, and in war; and it played a conspicuous and dashing part in Grecian and Roman history.

Civilisation, in the shape of easier locomotion, only crawled westward; and till the beginning of the present century the modes of getting about in England were primitive. Great lumbering carriages were known in France in the sixteenth century; and it is recorded that John de Laval de Bois-Dauphin "set up a coach on account of his great bulk." Similar vehicles were imported into or made in England in Elizabeth's reign. Without straps and springs, cumbersome, creaking, and slow, they were given, by someone possessing "the exquisite gift of humour," the swift-sounding name "whirlicotes." Occasionally they were, in jest, styled "Noah's arks" by the flippant courtiers of the time; but they were exceedingly popular, withal strange, bulky, unwieldy things, beside the trim four-in-hand that bears the crest of the Coaching Club. "The lord of the household 'no longer rode at the head of his servant, but sate apart in the newly-introduced coach.'"

The Duke of Buckingham drove a coach and six; the Earl of Northumberland drove a coach and eight. The aristocracy became so fond of riding, notwithstanding villainous road, and spill, and footpad alarm, that a



A STAGE-COACH EN ROUTE.

Bill was brought into Parliament early in the seventeenth century "to prevent the effeminacy of men riding in coaches." But the nobleman, the knight, and the country squire abandoned the saddle for long distances and declined to walk. Coaching was a necessity to the upper classes; and the institution of the stage-coach brought it within reach of "the common people" and made the highwayman's business more hazardous.

The "old coaching days" were crowded with incident—awkward, pathetic, and sometimes tragic.

There was the plunge into snowdrift, the masked figure standing beneath the guide-post at the four lane-ends, the gleam of the robber's pistol at the coach-door, the quick harvest of spoil, and the ring of Black Bess's hoofs on the road. More eventful still, perhaps, was the breakdown of the coach on the muddy highway in the swirling rain, and the hospitality of the landowner's big kitchen, with its ceiling thronged with flitches of bacon and great fat hams, and its thick, old-fashioned table set with bread-and-cheese, and pewters crowned with the snow-white froth of the home-brewed; for the tall, fine-looking woman sitting on the carved oak chest in the chimney-corner was not what she seemed. The firelight glimmered on the spurs and sludgy riding-boots only half concealed beneath her skirt; and notwithstanding the clever disguise of feminine manner and dress the noted highwayman was discovered and arrested, and the gibbet got another victim.

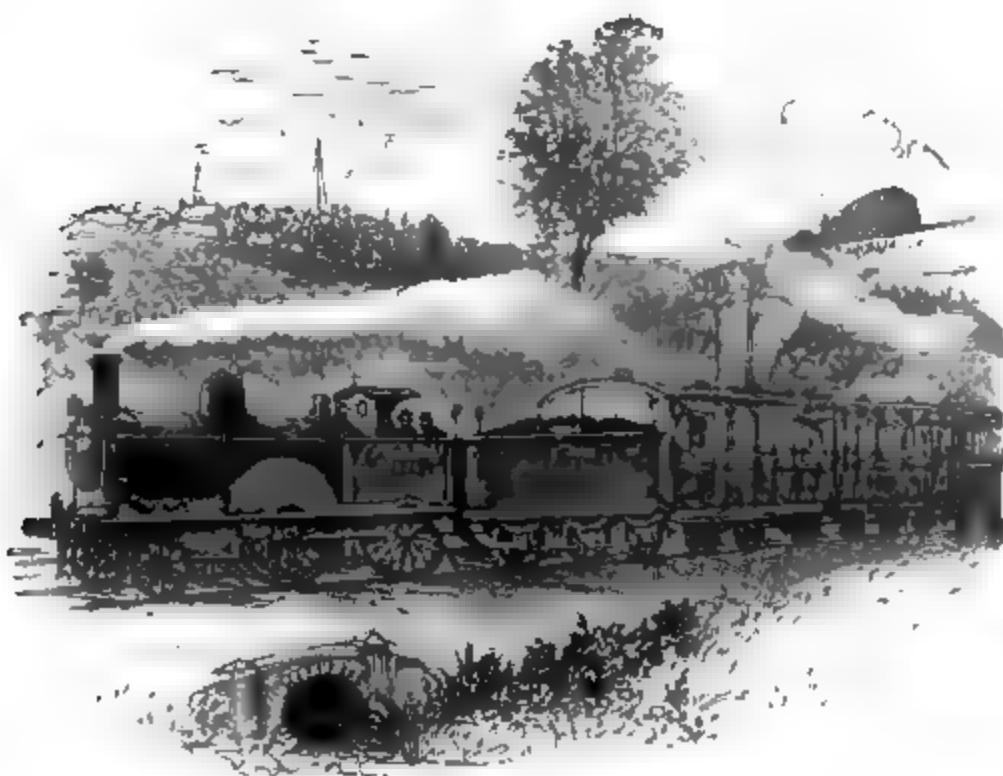
The sedan chair, that took my lady to the silk mercer's and to Court, and my lord to the House, or to dice-party, duel, and death, divided honours with the coach in carrying the quality till the first quarter of the present century, but was ridden down by the cabriolet, or cab, in 1823, and later by hansom, brougham, and phaeton. For years it was only in cities that these new-fangled carriages appeared. The pack-horse, the waggon, and the canal-boat were used for the transit of merchandise; and passengers in the main were content to journey by coach and carrier's cart. One of the most comical modes of travel was on

horseback—the husband astride the saddle, and his wife riding behind him on the soft pad or pillion, with her arms around his waist for security, and her tongue going faster than the nag. But the vehicle of pleasantries was the carrier's cart. The rural caravan, stuffed with goods and chattels, and food, and rosy-cheeked people, was the scene of many an amusing incident as it made its way along glade and up hill-side; and in some districts it still affords opportunity for humour. A few years ago, in a Midland country lane, the carrier's cart, swaying on its way to market, was stopped by a stout, dimpled, panting woman, with a big basket of butter and eggs on one arm and an equally large basket of orchard-fruit on the other, altogether a massive passenger. With amazing perseverance she scrambled, hot and almost breathless, into the crowded vehicle, stowing her baskets where she could, but there was no seat for herself. Not at all dismayed, she took a look round, and plumped down on the only man in the cart, contentedly remarking, "I'll sit uppa t' mester's knee!"*

The invention of the locomotive and the application of steam and electricity as motive powers have made a great change in the business methods and in the social life of England. Little more than half a century ago, sober-minded people thought the railway train, with its obstinate and erratic engine, and its wobbling passenger-trucks, almost a madman's toy. Now it

* "Derbyshire: Its Ballads, Poesy, Humorists, and Scenery," by William Smith.

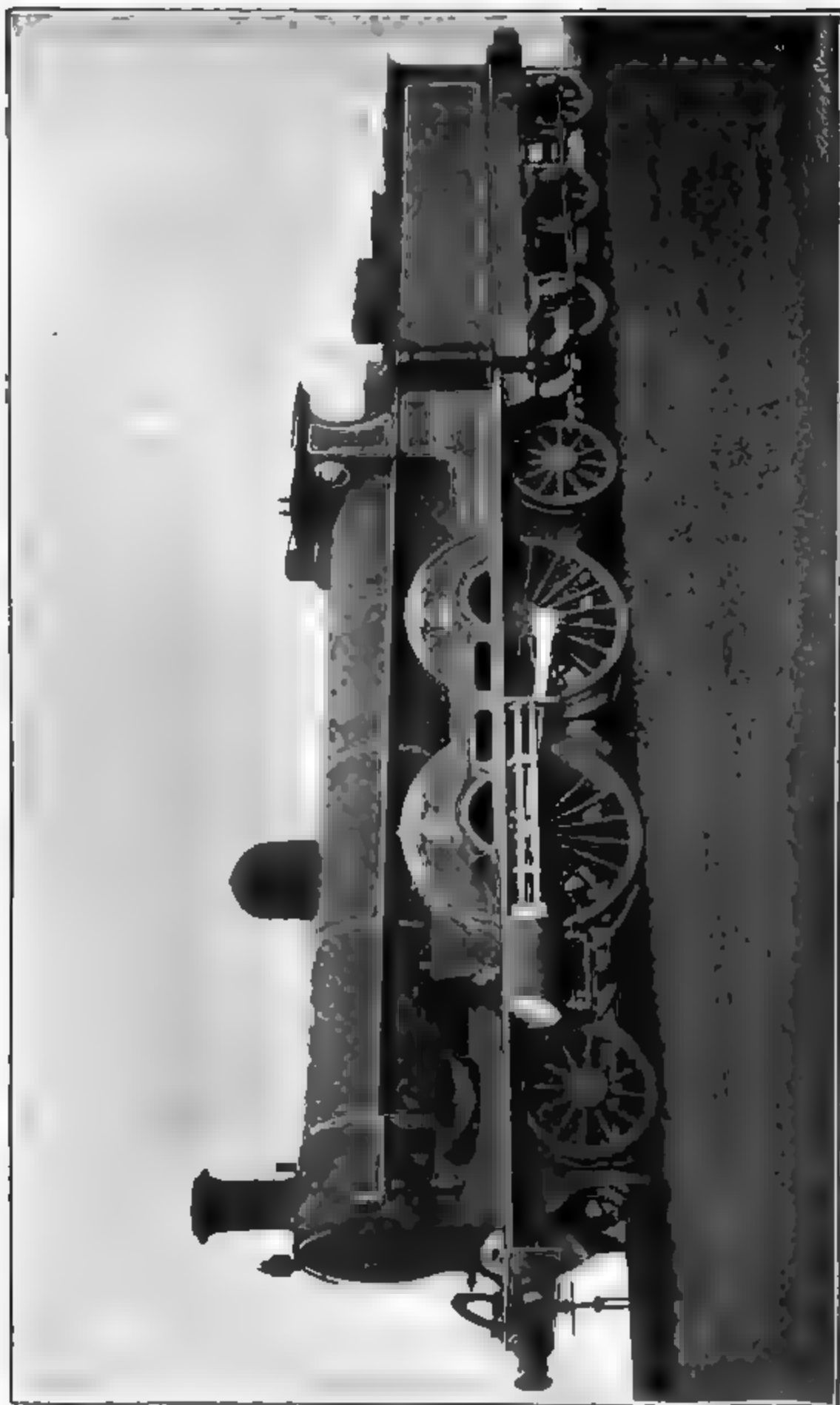
has become the chief agent of the nation. It runs readily for everybody, from the Queen on her comfortable way to Balmoral, to the rough miner, with pick under arm and jingling tea-can strapped to his waist, on



A LONDON AND NORTH-WESTERN EXPRESS PASSING HARROW

his way to work. It is so indispensable to our business pursuits, our home comforts, and our recreations, that a cynic has said we study the time-table more than the Bible.

Not the least remarkable phase of modern locomotion is the revolution that has taken place in railway travel itself. The old iron track has given place to the steel rail, the antiquated signal has been superseded by the block-system, the station-house is no longer a windy barn, wholesome food and drink are occasionally sold in the refreshment room, the rickety truck or



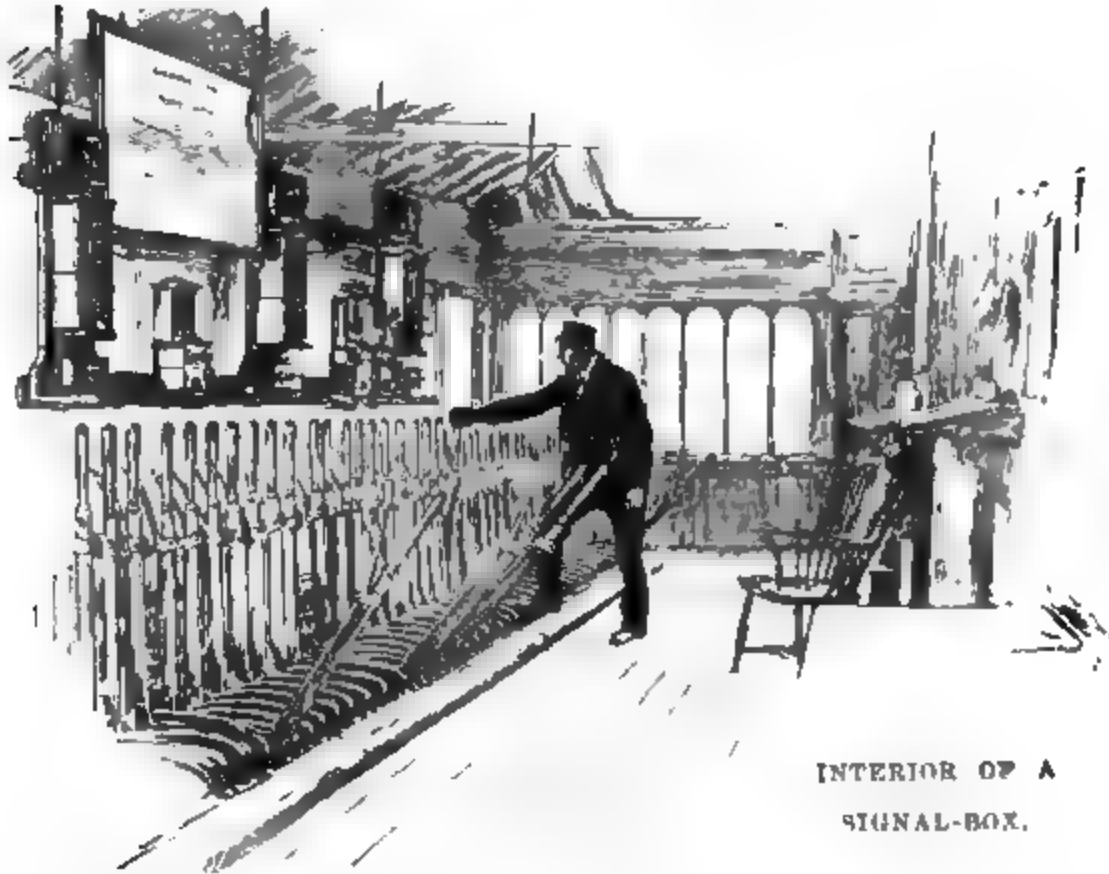
THE "GREATER BRITAIN."

omnibus has been broken up, and the modern railway carriage, running easily on bogie, is a roomy, well-cushioned, luxuriously-appointed vehicle, in which you may travel without fatigue, and in which you may read by electric-light, or dine, or sleep as comfortably as if you were between the sheets in your own chamber.

There has been other vital railway reform. While lines have extended to every corner of the land and to nearly every country on the globe, and passenger and goods traffic has enormously expanded, there has been lately a desire to treat the English railway servant as a human being: to give the signalman and the engine-driver better pay, and to relieve them from the excessive toil and duty that makes the body droop, and dazes the mind, and breaks the spirit.

After all, the greatest change has been wrought in the train-pullers — the locomotives themselves. Thought, science, engineering skill, and untiring experiment have fashioned and tested them. The ancient puffing-billies, such as the “Lancashire Witch” and the “Rocket,” which looked like mediæval engines of war, have been shunted for locomotives that are models of grace, motion, and speed—that can run sixty miles an hour without perspiring; and there are few more impressive sights in this busy country of invention and achievement than the compound express passenger-engine “Greater Britain” settling down to her work, after clearing Euston, for her long run on the North-Western track, or a Midland bogie passenger-

engine, flinging the steam on her back as she dashes across moorland and through tunnel to Carlisle; or that racehorse of the night, the eight-feet driving-wheel



INTERIOR OF A
SIGNAL-BOX.

main line express-engine on the Great Northern, as she comes along, with a rattle and a roar, with glowing head-light and breath of fire, through the darkness, while the world is asleep, with the exception of the quiet, serious-faced, grey-haired man in the lonely cabin who has just signalled the line clear for the "Flying Scotsman."

CHAPTER I.

THE DAYS OF THE COACHES.

A Dismal Junction—Wet Shunting—The Line Cleared for the Express—Where the Train Goes and Whom it Carries—A Picture of Human Life—The Rapid Growth of Railways—Old English Roads—The Pack-horse, the Carrier's Cart, and the Stage-coach—A Quaint Advertisement of Travel—Leisurely Journeys—The Pit Tramway—An Inventor in a Mad-house—Freaks of Genius—The First Locomotive—George Stephenson's Early Work and Struggling—A Shrewd Prophecy—Hustled off the Road.

THERE seems to be little poetry in a railway. Here and there it is gruesome and desolate. Even at a big junction, where the lines intersect each other and make a huge gridiron, there is scarcely anything picturesque. Yonder, high up in the signal-box, there is just discernible the back of a man's head and an arm moving about the gleaming levers. Down here on the numerous lines are scores of waggons, heavily laden with coal and pig-iron, and general merchandise, all apparently bumping and banging together to no purpose, so slowly do they move at the will of the shunting engine, that snorts angrily as it drags them away from the main line. The only thing that makes music is the wind, and it does this only along the telegraph wires. Nearer the line it howls and buffets the trucks, threatening to sweep the uncouplers off the buffers; but it does not blow away the aroma of train grease, or dry up the muddy pools that lie, too despondent even to ripple, between the sleepers. The rain pelts down. Everything is wet,

slippery, and dismal, except the great tarpaulins that cover the loads of perishable goods. They are dripping; but they shine and blink, just as if they enjoyed the storm, and heeded not the lampman's curses at the weather.

In a moment the fretted ways are instinct with life. The head and arm in the signal box move quickly. There is a rustle and creak of wires, a chorus of starts and jerks at the points. The main line is clear. From the cutting, a quarter of a mile away, comes a loud shrill whistle. Soon is heard the hiss of steam, and the express, the most striking modern example of resistless power, goes tearing by, shaking the ground with its tread. The fat driver is whisked into space before he has time to wink at the pointsman. There is a fierce clatter of rain on the carriage windows, and the flying train has gone on its way to some great city. Is its progress without poetry and romance?

Every step of the track it traverses is inseparable from enterprise and adventure. The express itself is a marvel of invention and creation; and it is on every journey an epitome of human life. It accommodates every class of society. It takes the statesman to the political gathering, the barrister to his circuit, the business man to his engagement. It is indispensable to the actor and to the journalist, and often of vital importance to the bishop and the physician, though they could hardly, without loss of dignity, run to catch a train. The express is a friend to the newly-married couple speeding away on their honeymoon, and a helper

to the emigrant as, full of hope, he hurries, with more or less wisdom, to a distant land. Not only the wealthy merchant, but the smart commercial traveller in fine raiment, and the obscure pedlar, dusty with his day's tramp through hamlet and country-side, use it.

There is a suspicion that John Ruskin, the only man in England who has a Corsican-like hatred of a railway, does not always travel by coach; and the daintiest and most prejudiced aristocrat of our time has survived his repugnance to railway travelling. At least he no longer imitates the locomotive whims and oddities of Sir Samuel Morland, who lived in the reign of Charles II., and built "for himself a coach with a sort of movable kitchen, so fitted with clockwork machinery that he could broil steaks, roast a joint of meat, and make soup as he travelled along the road." Nay, it is possible in these days, when men engaged in trade are created peers and pitmen are knighted, to rub shoulders with a nobleman in a third-class carriage.

There is no place, in fact, in which you can find such a variety of people in a space so small. The millionaire (for he does not always go first-class) and the beggar ride side by side. The philanthropist and the thief chat pleasantly about the weather, or sit in grim taciturnity thinking out projects of good and evil. The soldier is coming home from some daring exploit abroad; the sailor is going to join his ship and brave the gale; the signalman's wife, with a "free pass" and a chubby baby that pulls whimsical faces at the curate opposite, is going to join her husband higher up the line, where

he has got another box and more pay; the anxious passenger, who looks furtively out of the window at every stopping-place, and bites his finger-nails, and is wrinkled and tumbled in face and apparel, is, perhaps, some forger striving to elude justice; and the quiet, unobtrusive little man, nestling in the corner, with a black bag on his knee, may be the hangman! These people—whatever their business, duty, or pleasure—are being carried cheaply, with comfort and with such ease as their conscience will allow, to their destination. They are travelling, without effort, at the rate of fifty miles an hour. They are all saving time; and if time is really money, they must be richer at their journey's end.

In some out-of-the-way villages of England there are persons still alive who have never gone by rail; whose only equipage has been the carrier's cart, with its jogging, reflective horse and somnolent, nodding driver; but the great majority of English people have become so quickly accustomed to the train that they never think how it came into existence. They have a vague idea that George Stephenson had something to do with its birth; but they show far more interest in fumbling for the time-table, and rushing to the station, than they do in the growth of the railway system.

Yet what a remarkable system it is, and how rapidly it has developed! The country to-day lies beneath a vast network of Bessemer steel. The lines, after many a twist and twine through densely-crowded districts, focus in our great cities. The steel track, far more useful than the wonderful road of the Incas,

makes its way everywhere. It goes underground, under river, and over housetop; it spans busy streets, seldom free from the noise of traffic and the hum of toil; it crosses quiet shadowed lanes, and strides along fertile pastures, and curves through lonely moorland: there is no place too thronged, no land too wild for it. Day and night, in sunshine and storm, some train is always running along it—the battered, shambling train that takes the collier to work, the heavy goods train, the long “excursion,” the engine of which puffs and pants good-humouredly with its load to the seaside; the methodical, business-like ordinary, the dashing express, the drawing-room Pullman, the luxurious corridor train, or the mail thundering by in the darkness, plunging into tunnel and deep cutting, and throwing down and drawing in its huge arms with skilful nicety at station after station, as it flings out and receives the gigantic bags, congested with thousands of letters, that tell night by night the country’s striving and history.

The planning and construction of this huge means of transit and travel have not been the work of centuries. The great organisation has sprung into operation practically within the past sixty years. The railway has, in fact, civilised England in half a century. Previously trade was crippled because of the slowness and cost of carriage; and travelling, though the glamour of fiction has been thrown about it, was expensive, accompanied by much inconvenience, and not altogether free from peril. For years “the little

intercourse that was maintained between the various parts of Great Britain was effected almost exclusively by rude footpaths, traversed by pedestrians, or at best by horses." Even in the seventeenth century the roads were execrable, and the pack-horse was the chief goods carrier of the time. The first coach, it is recorded, was built in 1565, by the Earl of Rutland; but it was not until a century later that a systematic journey was attempted. This was made in 1669 by "the flying coach," that covered the distance from Oxford to London "between the rising and the setting of the sun." The exploit, however, was limited to the summer months, through a wholesome fear, no doubt, of the dangers of the road.

The English people were as loath to believe in the stage-coach as they were, later, to put faith in the railway. "If a man," said Sir Henry Herbert, M.P., in 1671, "were to propose to convey us regularly to Edinburgh in coaches in seven days, and bring us back in seven more, should we not vote him to Bedlam?" Nevertheless coaches gradually got upon the road in great number, and ran to Manchester, and York, and Newcastle, and as far as Edinburgh. How quaintly the journeys were advertised may be gleaned from the following advertisement, which appeared in 1712:—

"Edinburgh, Berwick, Newcastle, Durham, and London stage-coach begins on Monday, the 13th of October, 1712.

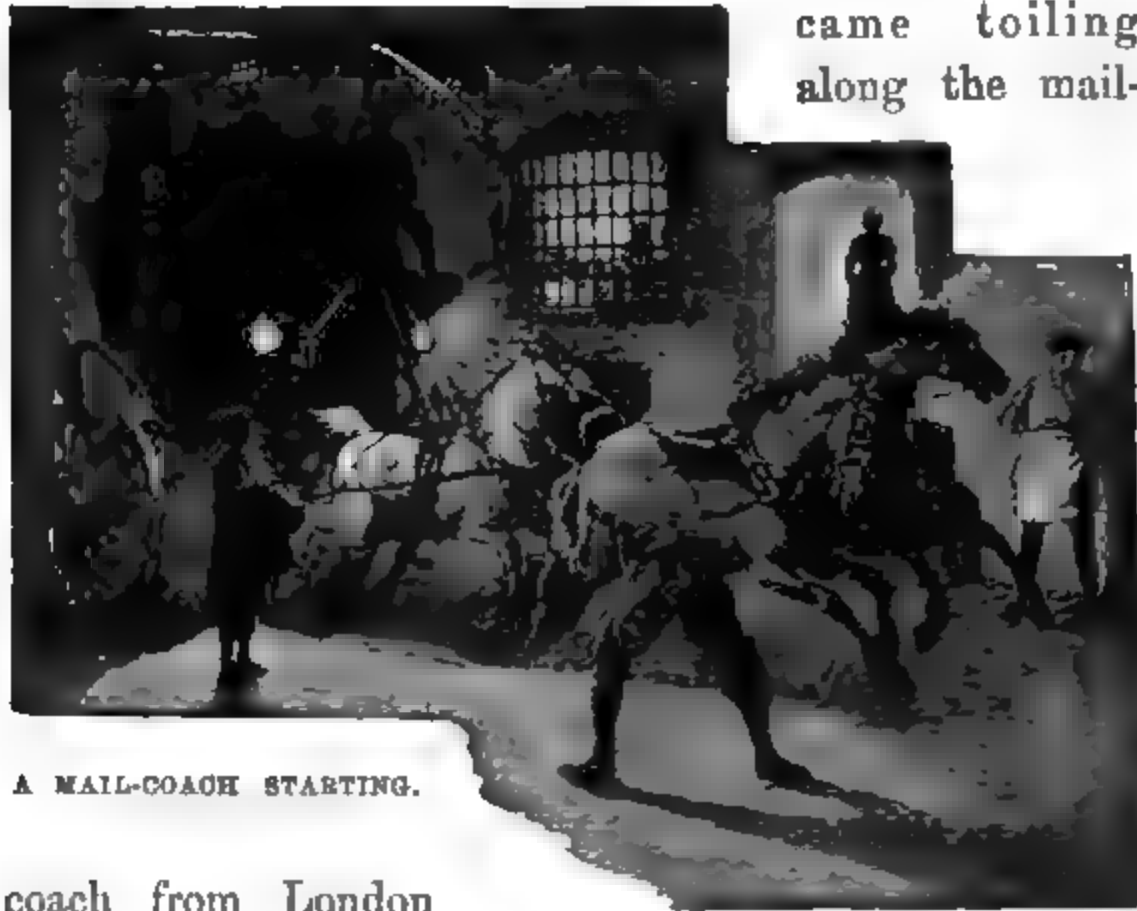
"All that desire to pass from Edinbro' to London, or any place on that road, let them repair to Mr. John Baillie's, at the Coach and Horses, at the head of Canongate, Edinbro', every other Saturday; or

to the Black Swan, in Holborn, every other Monday ; at both of which places they may be received in the stage coach, which performs the whole journey in thirteen days, without any stoppages (if God permits), having eighty able horses to perform the whole journey ; each passenger paying four pounds ten shillings, allowing each passenger 20lb. luggage ; all above, 6d. per lb. The coach sets off at six o'clock in the morning."

The railway traveller has now and then some thrilling experience ; but he is not so exposed to accident and fear as the stage-coach traveller of a century and a half ago, who was often upset, and delayed by breakdown, and frequently apprehensive of a polite invitation from the highwayman to hand over his purse. The pedlar, in some form or other, is with us yet. The pack-horse and the stage-coach also survived until this century ; and it is fortunate for literature that Charles Dickens "saw the last of the old coaching days, and of the old inns that were part of them," otherwise the present generation would have missed the amusing account of Pickwick's first acquaintance with the volatile Jingle during his ride on the "Commodore" coach to Rochester, and the great man's introduction to Sam Weller in the yard of the White Hart, the fine old balconied inn to which the perky lawyer brought anxious Wardle in search of his runaway sister.

Many novelists have given pleasant pictures of the old coaching days that lingered almost as long as the night watchman, who, before he was driven into obscurity by gaslight, prowled with his big lantern through the dark streets gruffly shouting the hour :

"Past two; dark as pitch. Wet morn." Here is one by Mr. Joseph Hatton:—"The horses champed their bits, and presently from the eastern corner of the market-place came toiling along the mail-



A MAIL-COACH STARTING.

coach from London to Manchester—a picture of light, and life, and elegance. A whip flourished harmlessly over the steaming cattle; a horn blown merrily behind; a flash of red and gold, and black and silver, and the coach pulled up in front of the Angel window. There was a rush of grooms and stable-helpers; and luggage, horses, and passengers, almost together, poured into the inn yard. . . . You knew that it had come from busy cities, through quiet country highways, by pleasant homesteads, over chattering streams, that children had greeted it from field and

hedgerow, that it had passed slow, lumbering waggons and farmers' gigs; that it had halted here and there to have the horses' mouths washed out, and the passengers regaled with foaming ale." Certainly there was one advantage about this old style of travelling—it was free from hurry. The coach did not start to the minute, and the midday rest was ample. Two hours, as a rule, were allowed for dinner, and after that time had sped with good living, the waiter would remark, "Don't hurry yourselves, gentlemen. The coach is ready, but don't let me disturb you if you wish for another bottle."

Life was leisurely in those days. It had not been quickened by such means of travel as the "Flying Scotsman," that runs the 188 miles from London to York in three hours and forty-five minutes. Nor had it such methods of annihilating time and space as the telegraph and the telephone. Business was done calmly and methodically between dawn and darkness, and the fierce spirit of competition, that now makes nearly every class restless, disturbed nobody's equanimity. There was, however, some indication of impatience at the slowness of locomotion and the great cost of the transit of merchandise. The impatience was fostered by the possibilities of improvement that the use of wooden tramways and the construction of canals foreshadowed. The primitive, clumsy tramroad was undoubtedly the forerunner of the railway. It was at first a rude, rugged way, little better than the country roads that the traveller through Lancashire cautioned

all men to "avoid as they would the devil, for a thousand to one they would break their necks or their limbs by overthrows or breaking down;" but the track, consisting merely of logs of wood flung down in parallel lines, proved a godsend to the trader.

The timber railway was chiefly used to run coal from the Northumbrian pits down to the Tyne; and Roger North, describing Lord Guilford's visit to Newcastle in 1676 says: "Among the curiosities of the place were way-leaves. When men have pieces of ground between the colliery and the river they sell leave to lead coals over their ground, and so dear that the owner of a rood of ground will expect twenty pounds per year for this leave. The manner of the carriage is by laying rails of timber from the colliery down to the river, exactly straight and parallel, and bulky carts are made with four rowlets fitting these rails, whereby the carriage is so easy that one horse will draw four or five chaldron of coals, and is an immense benefit to coal merchants." The tramroad soon merged into wider use, and in 1767 cast-iron rails were made, and later applied to the construction of this kind of traffic-way.

In the meantime the invention of the steam engine by James Watt had made the world begin to throb, and to foster and impel invention. Solomon de Caus, who was placed in the Bicêtre at Paris to keep his brain from mischief, is credited with the honour of being the originator of the idea that carriages and ships could be propelled by steam. Marion de Lorme, who went

through the madhouse in 1641 with the Marquis of Worcester, wrote : “ We were crossing the court, and I, more dead than alive with fright, kept close to my companion’s side, when a frightful face appeared behind some immense bars, and a hoarse voice exclaimed, ‘ I am not mad ! I am not mad ! I have made a discovery that would enrich the country that adopted it.’ ‘ What has he discovered ? ’ asked our guide. ‘ Oh ! ’ answered the keeper, shrugging his shoulders, ‘ something trifling enough ; you would never guess it : it is the use of the steam of boiling water.’ ”

Genius indulged in some strange freaks in seeking to apply steam as a motive power. One inventor wasted a good deal of thought and time in building a machine that rivalled a horse’s hind legs in movement ; another made an engine that more closely imitated Nature, for it went on four legs ; and a third grappler with the science of locomotion constructed an engine that ran along a tooth-rack. The first locomotive—a machine that actually glided on rails at a speed of five miles an hour, and dragged waggons bearing ten tons of bar iron and seventy persons—aroused much attention on the Merthyr Tydvil line in 1804.* It was a curious-

* A Bristol newspaper, of March 3, 1804, contains the following account of the first locomotive :—“ On Tuesday last [really February 22] a trial was made of one of Mr. Trevithick’s steam engines at Merthyr Tydvil, for the purpose of ascertaining its powers in drawing and working carriages of all descriptions on various kinds of roads ; and it was found to perform to admiration all that was expected from it. In the present instance it was made use of to convey along the tramroad ten tons long weight of bar iron from Penydarren ironworks to the place where it joins the Glamorganshire canal, upwards of nine miles distant ; and it is necessary to observe that the weight of the load was soon increased from ten to fifteen tons by about seventy persons riding on the trams, who,

looking engine, with a long chimney, and a cylinder that stuck out something like a trombone from a player's lips; but worked with high-pressure steam, and running on smooth, flat wheels, it made headway, and Richard Trevithick, its inventor, just missed overtaking fame on it. His misfortune was that he was too brimful of invention. His head was crowded with enterprising schemes, but he completed few, one of his unfinished exploits being the partial tunnelling of the Thames, beneath which he bored and crawled one thousand feet.

Hero of Alexandria had, two thousand years ago, a very good idea of the power of steam; but it was not until 1814, when an engine built by George Stephenson was placed on the Killingworth Railway, that anyone had great faith in its capacity to draw loads. "The first locomotive which I made," he said, speaking years afterwards, "was at Killingworth colliery with Lord Ravensworth's money. Yes! Lord Ravensworth and Company were the first parties that would entrust me with money to make a locomotive engine. That engine was made thirty-two years ago, and we called it 'My Lord.' I said to my friends that there was no limit to the speed of such an engine—

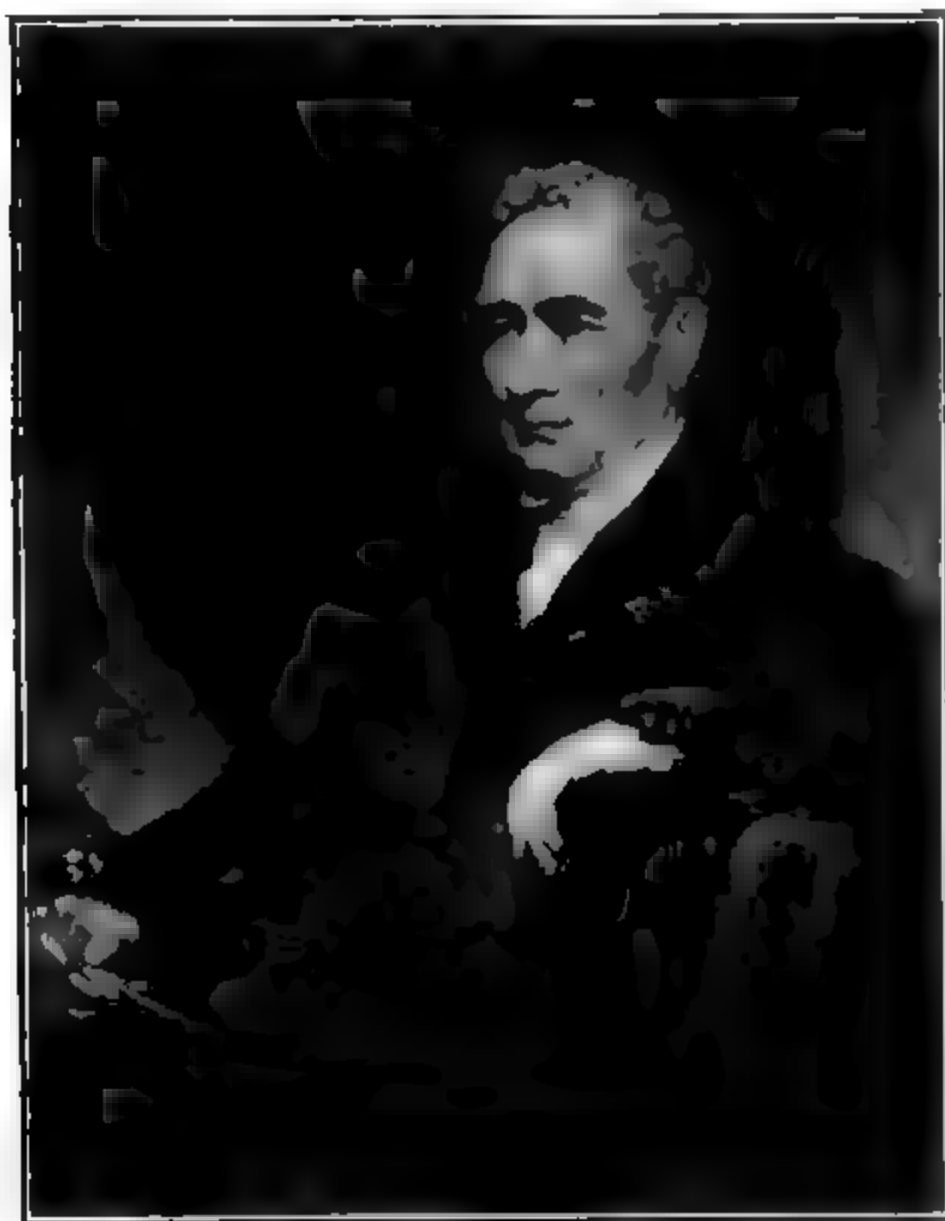
drawn thither (as well as many hundreds of others) by invincible curiosity, were eager to ride, at the expense of this first display of the patentee's abilities in that country. The engine differs from all others yet brought before the public by disclaiming the use of condensing water and discharges its steam into the open air. It takes much less coal to work it, and it is only necessary to supply a small quantity of water for the purpose of creating the steam. It performed the journey without feeding the boiler or using any water, and will travel with ease at the rate of five miles an hour."

provided that the works could be made to stand." The engine, which had two cylinders, was uncouth and unwieldy, but it did its work—dragging up an ascent eight waggons with a load of twenty tons.

Prejudice and incredulity died hard. The adage "A fool and his money are soon parted" was applied to Lord Ravensworth; and though a few people had confidence in George Stephenson and his inventive skill, the majority, wrapping themselves in the cloak of Will Somers, the jester, gave license to their sense of the ludicrous, and sought to embarrass him with ridicule. The laugh was not all on one side. George Stephenson, who had met with obstruction and disappointment in the days when he acted as cow-herd, shoemaker, turnip-hoer, gin-driver, and engine-tenter, was not easily daunted, and went on his sturdy way of endeavour, unheeding even the drastic criticism of men like Lord Eldon, who said, "I am sorry to find the intelligent people of the North-country gone mad on the subject of railways."

The inventor of the safety lamp, and "the father of the railway system," lived to see this madness develop amazingly; though perhaps he little thought the "Quaker's Line" that he engineered, and the Liverpool and Manchester Railway over which he drove "The Northumbrian" engine on the opening of the line, would ultimately be connected with a thousand steel tracks stretching through the length and breadth of the land, and would be linked by club-boat, liner, merchant-man, and caravan, with a thousand other lines on the

Continent, in Asia, Africa, the Colonies, and in America, revolutionising wherever they penetrated the



GEORGE STEPHENSON.

industry and trade of the world. He had some idea of what was coming, however, inasmuch as he said to his pupils, before the Stockton and Darlington line was completed: "Now, lads, I venture to tell you that I think you will live to see the day when railways will

supersede almost all other methods of conveyance in this country—when mail-coaches will go by railway, and railroads will become great highways for the king and all his subjects. The time is coming when it will be cheaper for a working man to travel on a railroad than to walk on foot.”

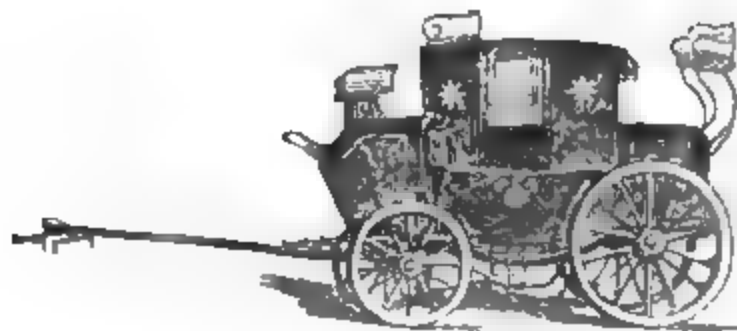
The railway soon proved ruinous to the stage-coaches. The rivalry—on one side—was desperate. The old-fashioned vehicles had to fight for existence. New coaches of improved build, and better horsed, were put on the road; excellent time was kept; and the journeys were done far more quickly, with little tarrying for dinner. But the struggle was altogether unequal. The *Quarterly Review* incredulously exclaimed: “What could be more palpably absurd and ridiculous than the prospect held out of locomotives travelling *twice as fast* as stage coaches?” But locomotives soon ran *thrice as fast*; and by-and-by many a road was deserted—there was no longer the clatter of the leaders’ hoofs on the highway, or the swing and the rumble of the gaily-painted coach, or the inspiriting notes of the guard’s horn, or the merry jingle of harness and voices at the inn porch.

The stage-coach has not been driven entirely into oblivion. It is a popular summer vehicle in many counties. It runs by pleasant ways out of London; it is dragged up the steep shoulders of Topley Pike from Buxton; it takes many a light-hearted load through the Yorkshire dales; and makes adventurous tours along the lonely roads that skirt the English lakes. The lapse of

time has worn down its bitter hatred of the railway, and now it is to some extent in the service of its old enemy, for in connection with the trains on the London and North-Western, the Great Western, the Glasgow and South-Western, and many other lines, it supplements the work of the railway; taking passengers into "the Shakespeare Country," into the glens of Wales, the valley of Nith, and a hundred picturesque haunts.

As recently as July 13, 1888, James Selby drove the "Old Times" coach from London to Brighton and back under eight hours, a feat that pleased old whips; but the stage-coach, where it does linger, lingers chiefly as a source of recreation. It is dead as a necessity to travellers and a carrier of merchandise. What regret, anger, foreboding and humour were caused by its departure from the road! The innkeepers were in despair, and the horse-breeders and dealers ground bits of straw savagely between their teeth. The country tradesmen were filled with concern, and there was trepidation in many a heart. What, for instance, was to become of the coachman, guard, ostler, and stable-helps? They went, more or less, into obscurity, and were obliged to find other occupations. In the north, south, and west the coaches were gradually taken off the highway, and such notices as the following were common in the newspapers, particularly in the years 1842 and 1843: "A few years since ninety-four coaches used to pass through St. Albans daily. On Saturday last the Leeds Express, formerly called the 'Sleepy Leeds,' which has been on the road upwards of a hundred years, ceased running, it

being no longer a profitable speculation ;” or, “ The whole of the stage coaches from Glasgow and Edinburgh are now off the road, with the exception of the six o’clock morning coach, which is kept running in consequence of its carrying the mail bags.”



CHAPTER II.

THE FIRST RAILWAYS.

A Remarkable Railway Servant—Some Erratic Locomotives—A Daylight Line—The Quaker and Coming Fortune—Opening of the Stockton and Darlington Railway—George Stephenson as an Engine-Driver—Comical Trains—Novel Mode of Travel—Old Time Railway Carriages—What the First Railway Did—A Busy Northern City—Trade and Traffic in Manchester—The Railway to Liverpool—A Righteous Horror of Sunday Trains—Whimsical Prejudices against Railway-Making—Extraordinary Predictions—The Story of Chat Moss.

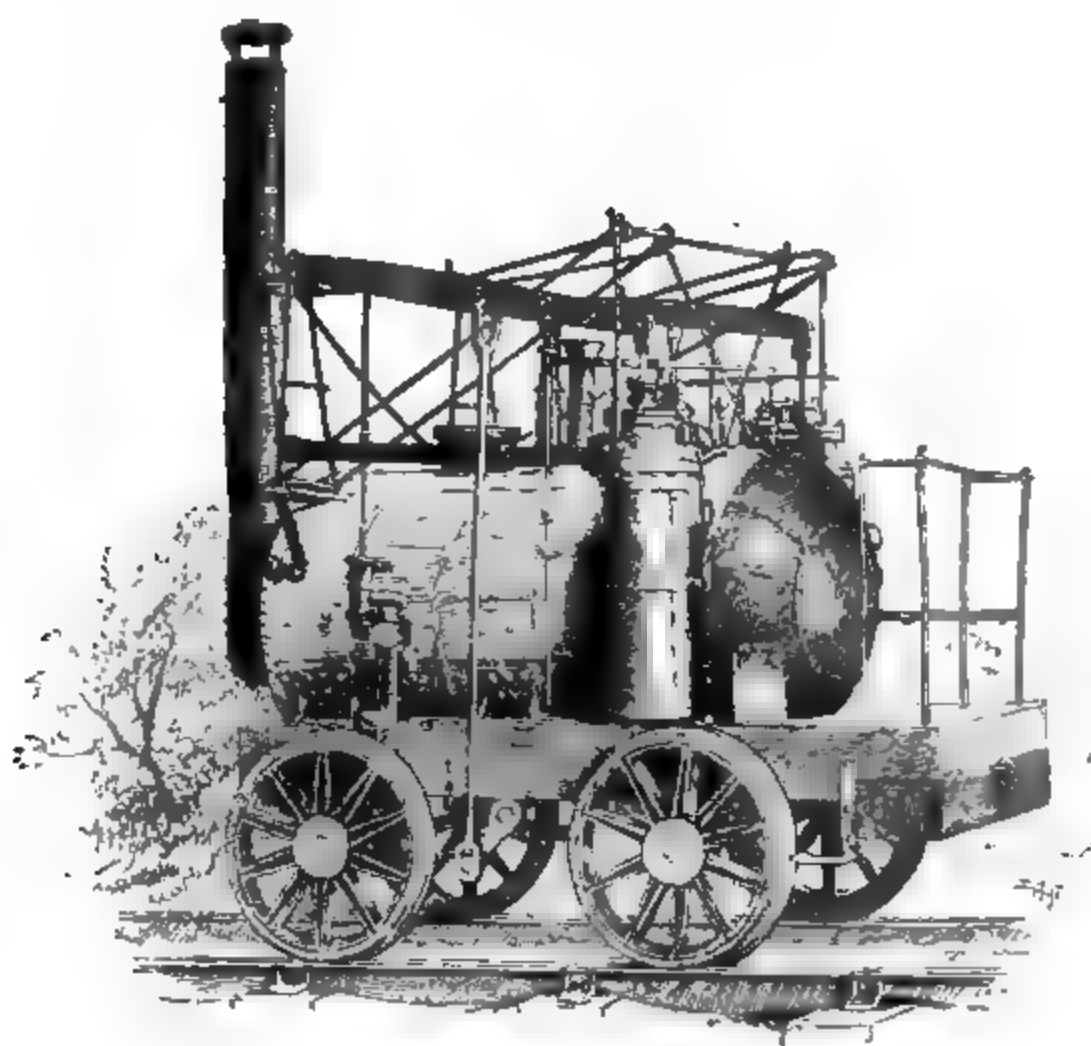
THE railway, with its ingenious signalling and block system, with its fast trains southward and westward, and numerous expresses racing northward, is hastening towards perfection, yet in some of its remote ways it is incomplete. There is a story told with regard to an important line, that it lately carried goods to a certain town so slowly that a bird's nest was found in one of the waggons at the journey's end; and during the inquiry before the Select Committee of the House of Commons in 1891, with regard to the number of hours worked by railway servants, amusing evidence was given as to the life of a servant on the Great Northern Railway of Ireland. Like the familiar character in the Gilbert-Sullivan opera, he was "a slave to duty." The man, who was stationed at Drogheda, was on duty from six o'clock at night until six o'clock in the morning 365 nights in the year. During a part of the night he was in sole charge of the station, and acted as station-master, booking-clerk, signalman, watchman, and shunter. In

fact, he had to work the signals for the night mail, to issue tickets, and to attend to the passengers.

His lot would have been harder, no doubt, if he had been employed on that early railway in England, the single line from Merstham to Wandsworth, through Croydon—a line along which the trucks were drawn by “a miserable team of lean mules or donkeys.” Nor would he have found much leisure in life if he had been associated with George Stephenson in his industrious career. The engineer was always at work improving or driving his own engines, and he had some thrilling experiences with these locomotives—“Blucher,” christened after the Prussian general; and “Flying Childers,” named after the noted racehorse. These engines were crotchety and irascible, declining to budge and threatening to blow up. When willing to travel they needed help in rough places and at crossings; and on the Killingworth Railway there was many a laughable incident owing to the stubbornness or helplessness of “Puffing Billy.” The line ran near James Stephenson’s house, and when he was driving the engine for his brother, and it stuck fast at a curve, he was wont to shout to his wife: “Hey! Jean. Come oot, and gie us a shove roond the turn!”

The locomotive did not inspire confidence. On the Stockton and Darlington Railway the directors hesitated to trust the shrieking thing. Perhaps its hoarse voice and erratic ways were repellent to Edward Pease, the Quaker, who projected the line. Anyhow, the Bill that passed on April 19, 1821, sanctioning the construction

of the railway hazarded no mention of the locomotive. The preamble set forth that "the making and maintaining of a railway or tramroad for the passage of waggons and other carriages will be of great public utility by facilitating the conveyance of coal, iron, lime, corn, and other commodities." The road was



"PUFFING BILLY."

practically only to be used in the daylight, and "with horses, cattle, and carriages." George Stephenson, who had been engaged in the construction of a railroad from Hetton pits, near Houghton-le-Spring, to the banks to the Wear, for the more easy

shipment of coal, heard of the new project, and towards the end of the year in which the preamble was proved, obtained an introduction to Edward Pease at Darlington.

The rough enginewright bluntly told the Quaker capitalist that his locomotive "was worth fifty horses, and that engines made after a similar plan would yet entirely supersede all horse-power upon railroads." Edward Pease was not sanguine; he was very cautious. He spoke of the opposition he had had to surmount; he hinted at the difficulties to come. George Stephenson, however, adroitly overcame his scruples, saying: "I think, sir, I have some knowledge of craniology, and from what I see of your head, I feel sure that if you fairly buckle to this railway, you are the man to successfully carry it through." And this was the Quaker's reply: "I think so too; and I may observe to thee, that if thou succeed in making this a good railway, thou may consider thy fortune as good as made."

How vividly these sentences recall the quaint, old-fashioned mode of speech that obtained more widely among the Society of Friends in the earlier part of the century! They bring to mind the quietude of the Quakers' meeting, in which a great stillness reigned, "as though one was buried in thought in the cavern of Trophonius." They remind one of the "thee" and "thou" in the dignified greetings afterwards, and the spotlessly clean group of worshippers—the women moving away in grey dresses, cream-coloured spun-silk shawls, and huge coalscuttle black silk and satin-lined

bonnets, and the men in drab breeches and gaiters, and brown coats and broad-brimmed hats, formerly the distinctive garb of the members of the society founded by William Penn.

It is easy to imagine the thoughtful, shrewd manner and sayings of Edward Pease, who, after searching inquiry, was requested by the directors to communicate with George Stephenson as to the feasibility and cost of converting the tramroad into a railway. "We wish thee," he said, prompted by thrift and preciseness, "to proceed in all thy levels, estimates, and calculations, with that care and economy which would influence thee if all the work was thy own." The punctilious Quaker was satisfied with the zeal and exactness with which George Stephenson did the work, and then went to Killingworth to see his locomotive, patiently waiting till he came out of the pit. Edward Pease could find little fault either with the engines or the engine-wright, and George Stephenson, clad in rough apparel, and wearing top boots and breeches after the fashion of the time, was soon busy with the more detailed survey in his capacity as engineer of the new line. It was in a moment of leisure from this task that he surprised Edward Pease's daughters by his knowledge of embroidery, an art he learned "while working pitman's button-holes by the engine fire at nights."

The line, which was laid with both malleable- and cast-iron rails, was forty miles long, and cost £250,000. It was opened, amid great curiosity and excitement, on September 27, 1825. Horses, stationary engines, and

locomotives were tried as movers of traffic. The locomotive, though its chimney became nearly red-hot, did not burst. It behaved excellently. George Stephenson was the driver ; and he received the train—which consisted of six loaded waggons, a passenger carriage, twenty-one trucks fitted with seats, and six waggons filled with coal—at the foot of an incline about nine miles from Darlington.

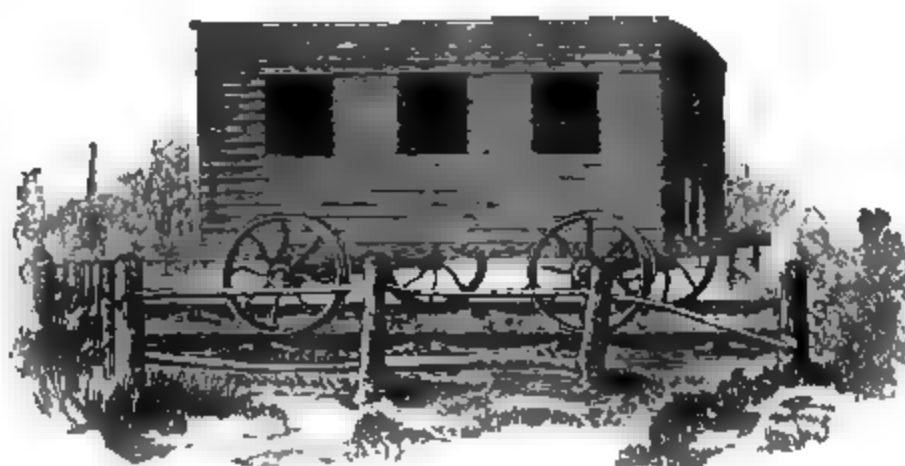
“The signal being given,” says an enthusiastic descriptive reporter of the time, “the engine started off with this immense train of carriages, and such was its velocity, that in some parts the speed was frequently twelve miles an hour, and the number of passengers was counted to be 450, which, together with coals, merchandise and carriages, would amount to near ninety tons. The engine, with its load, arrived at Darlington, a distance of eight and three-quarter miles, in sixty-five minutes. The six waggons loaded with coals, intended for Darlington, were then left behind, and obtaining a fresh supply of water, and arranging the procession to accommodate a band of music, and numerous passengers from Darlington, the engine set off again, and arrived at Stockton in three hours and seven minutes, including stoppages, the distance being nearly twelve miles.”

Comical trains are not yet extinct. The “Paddy Mail,” that runs from Chesterfield to Staveley, in Derbyshire, is a rich curiosity as a vehicle of locomotion, with its battered carriages and odour of thick-twist, stronger than any smell of tobacco that came

from the Witch of Endor's pipe, and burly, muscular, shouting, laughing passengers, with faces black as Erebus. The "Harlequin Train," with its whimsical mixture of coaches from nearly every system, never starts on its journey over the Scotch line without provoking a smile. Mr. W. J. Gordon, writing on "Every-day Life on the Railway," says of the Highland express from Perth: "This is the most astonishing train in the island, and the strangest of monsters to meet as it comes climbing round a hillside with two engines in front and one behind. The way in which trains are made up south of the Tweed—on the London and South-Western, for instance—is puzzling enough; but how the Highland 'Harlequin' gets together is a mystery. Here are from thirty to forty vehicles, representing, perhaps, a dozen companies—vehicles of all sorts, horse-boxes, carriage vans, luggage vans, saloons, composites, sleepers, all higgledy-piggledy—North-Eastern and North-Western and Great Western, North British and Midland, and Brighton, Chatham and Dover, and Manchester, Sheffield and Lincolnshire, North Stafford and Highland, and London and South-Western—as if the agent of a firm of carriage builders had come travelling north and brought his samples with him. No wonder that the Scottish trains are late, when the staff to handle all this is insufficient; and no wonder that the three great north-going English lines are held accountable for the delay."

In time of pressure in the holiday season an

excursion train consisting entirely of guards' vans has been sent out; and it is asserted that on one of the cross-country lines a train may occasionally be seen shaking, jerking, and clattering along with a gait so



THE "EXPERIMENT."

hesitating and peculiar that passers-by linger near the embankment expecting to see it fall to pieces, and some of them, giving the reins to romance, affirm that the carriages are only tied together with bits of string. But none of these queer products of railway enterprise or expediency equals in grotesqueness the first train that ran with passengers on the Stockton and Darlington line. Its engine, though guided by the firm hand of George Stephenson, was boisterously skittish, and its composition was one of infinite variety, the open passenger coaches, with their rough hard seats, being in very uncomfortable contrast to the cushioned benches in the compartments of the third-class carriage as we know it. Perhaps the most erratic things about the train were its passengers. They crowded everywhere in delight, suspense, and some

even in fear; there were no fewer than 600 persons on the train when it returned to Stockton, and, of these, many were "hanging on to the waggon."

The train included, however, one vehicle that may be considered the parent of the host of luxurious carriages that now make English railway travelling a pleasure. It was a coach fashioned by George Stephenson, and styled the "Experiment." It was practically a railway omnibus, with the door at the end, and seats down each side, and in one respect more accommodating than the ordinary railway carriage of later

date, inasmuch as it contained a deal table. The railway-coach, which was very popular on this memorable ride, was placed on the line for regular travel a fortnight afterwards. Drawn by one horse it managed

Stockton & Darlington
Railway.
The Company's
COACH
 CALLED THE
EXPERIMENT,

Which commenced Travelling on MONDAY, the 10th of OCTOBER, 1825, will continue to run from Darlington to Stockton, and from Stockton to Darlington every Day, (Munday's excepted) setting off from the DEPOT at each place, at the times specified as under. (viz.)—

ON MONDAY,
 From Stockton at half past 7 in the Morning, and will reach Darlington about half-past 9; the Coach will set off from the latter place on its return at 3 in the Afternoon, and reach Stockton about 5.

TUESDAY,
 From Stockton at 3 in the Afternoon, and will reach Darlington about 5.

On the following Days, viz.—
WEDNESDAY, THURSDAY & FRIDAY,
 From Darlington at half-past 7 in the Morning, and will reach Stockton about half-past 9; the Coach will set off from the latter place on its return at 3 in the Afternoon, and reach Darlington about 5.

SATURDAY,
 From Darlington at 1 in the Afternoon, and will reach Stockton about 3.

Passengers to pay 1s. each, and will be allowed a Package of not exceeding 14lb. all above that weight to pay at the rate of 2d. per Stone extra. Carriage of small Parcels 6d. each. The Company will not be accountable for Parcels of above 50s. Value, unless paid for as such.

Mr NICHOLAS PICKENHILL at his Office in Commercial Street, Darlington; and Mr TULLY at Stockton, will for the present receive any Parcels and Book Passengers.

FAC-SIMILE (REDUCED) OF AN ADVERTISEMENT OF THE "EXPERIMENT."

to cover the distance, twelve miles, in two hours, and the fare charged was only one shilling—the foundation possibly of the penny-a-mile fare.

By-and-by George Stephenson's engines got on the railway. One of his locomotives, the "Active," raced the stage-coach that still clung to the highway, and beat it. Traffic, both passenger and goods, quickly came to the line. People began to realise that they were really alive, and that there was a country beyond Cleveland. The mineral wealth of the locality was more deftly handled. Industries rapidly developed, and business improved. The undertaking, which paid on its first year's working, soon yielded a dividend of 10 per cent., and in making dividend the Stockton and Darlington Railway Company created Middlesbrough.

Perhaps no city in the world scarcely London itself—has a busier area than that on which the warehouses crowd and cluster in Manchester. Many of these business-places, if not exactly beautiful in outline, are impressive in build, and have a certain nobility of architecture. Others make no pretension to grace of form. They are square and grim. Their windows are piled so high with goods that daylight and sunlight seldom penetrate to all the departments. One almost expects to find chalked on the dingy brickwork above the door, "We care nothing for appearances : we mean business !"

Portland Street, the principal warehouse thoroughfare in the city, is always immersed in business. The streets branching right and left are full of it. There

is an incessant roar of traffic, sometimes an apparently hopeless block of horses and vehicles. The roadway is crowded with merchandise. There are great dray-loads of calico and calico-prints; lorries heaped with tin-lined, tightly-filled packing-cases for export; covered vans congested with parcels; almost every kind of conveyance taking away every kind of Manchester goods. There are the products of industry and manufacture everywhere. The cellars are choked with material. Beyond the deep staircases you catch sight of great bundles and bales and refreshingly-white heaps of calico, over which muscular men are climbing, decreasing or increasing the bulk according to order. Calico comes tumbling out of second and third-storey windows, and thuds amid the dust of its own sizing, on the drays standing by the causeway edge. Big, sleek horses suddenly pop their heads out of archways, and drag across the pavement huge loads of something—of calicoes printed or plain, of silks, quilts, carpets, rugs, aprons, gingham, seals, Oxfords, muslins, of great bales bearing the caution in large letters “not to be slung,” and of massive boxes stamped with the encouraging information that everything they contain has been “made in England.”

At the corner of the street, appropriately styled Velvet Street, there is a bewildering chaos of traffic, and in nearly every roadway around the Royal Infirmary—for it is in this locality that great warehouses like those of Messrs. S. and J. Watts and Co., Messrs. Phillips and Sons, and Messrs. Rylands and Sons stand—

there is the rumble, clatter, and hurry of trade activity. The volume of business done in Manchester, and especially in this part of it, is amazing. The bulk of goods sent away in one day for use in our own land and for export is enormous. In the goods depôt beneath London Road Station alone more than two thousand tons of merchandise are dealt with daily, hauled by hydraulic machinery into the luggage-trains, and sent to the "ends of the earth." The daily money turn-over in the city would comfortably rescue many railway passengers from brigands, although the modern brigand is becoming very extortionate in his demands.

Manchester is greatly indebted to the railway for this trade development. It would have been impossible by the old methods of business and the old system of conveyance by waggon, carrier's cart, and slowly-moving canal-boat, to have secured and grappled with anything like such an amount of merchandise. Yet sixty years ago Manchester had only just become possessed of a railway. In 1830, when the Liverpool and Manchester Railway—the first line in the kingdom of any note—was opened, and the directors announced their intention of running trains on Sundays, so little had the cotton-manufacturing people got accustomed to railway progress and innovation, that "a meeting of Manchester ministers of various denominations was convened, and resolutions adopted condemning the step thus taken, and expressing a hope that the directors might be induced to reconsider their determination, and that no temptation merely of pecuniary advantage would

prevent them receding from a course which might otherwise be found out 'to have placed them in direct opposition both to the law of God and to the most enduring interests of society.'"

The story of this railway project is tinged with romance and comedy, but it is stamped, too, with indomitable will and energy. The opposition to the proposed line was almost remarkable in its bitterness. The landowners, and particularly the canal companies, sought in every way to frustrate the object of the promoters; but the merchants and manufacturers of Liverpool and Manchester, hampered in their operations by antiquated means of transit, determined that the railway should be made. George Stephenson entered upon the survey resolutely. He knew his task would not be altogether a pleasant one, for he was aware that William James, a Staffordshire ironmaster and daring railway projector, had previously inspected a part of the ground, and found it necessary to let a prize-fighter carry his theodolite, inasmuch as the people were very hostile, and threatened the surveyor and his assistants with guns, pitchforks, and sticks, and even stoned them. But Stephenson had received the orders of the committee to make the survey, and he made it, indifferent alike to the howling and to the physical force of his opponents. Lord Derby declined to allow him on his land, and so did Lord Sefton, and the survey through the Duke of Bridgewater's property was inseparable from exciting incident. "I was threatened to be ducked in the pond if I proceeded," says the engineer,

“and of course we had a great deal of the survey to take by stealth at the time when the people were at dinner. We could not get it done at night, and guns were discharged over the grounds to prevent us.” At Knowsley, however, having been driven out of the park and threatened with a thrashing, he neatly outwitted his foes, going “suddenly and unexpectedly on the ground with a body of surveyors and their assistants, who far outnumbered Lord Derby’s keepers and farmers hastily collected to resist them.”

The opposition in Parliament was as persistent and vindictive as in field and byway. Fictions worthy of the most romancing character in “The Arabian Nights’ Entertainments” were cleverly placed on the wing, and they flew into everybody’s house. Dr. Smiles, in his “Life of George Stephenson,” says:—“Pamphlets were written and newspapers were hired to revile the railway. It was declared that its formation would prevent cows grazing and hens laying. The poisoned air from the locomotives would kill birds as they flew over them, and render the preservation of pheasants and foxes no longer possible. Householders adjoining the projected line were told that their houses would be burnt up by the fire thrown from the engine chimneys, while the air around would be polluted by clouds of smoke. There would no longer be any use for horses, and, if railways extended, the species would become extinguished, and oats and hay unsalable commodities. Travelling by road would be rendered highly dangerous, and country inns would be

ruined. Boilers would burst, and blow passengers to atoms. But there was always this consolation to wind up with—that the weight of the locomotive would completely prevent its moving, and the railways, if made, could never be worked by steam power!"

Even William Brougham, who was counsel for the promoters, bluntly told George Stephenson, at one of the preliminary consultations, that if he boasted so much about the speed of his engine before the Committee he would "inevitably damn the whole thing, and be himself regarded as a maniac fit for Bedlam."

The prospectus, a business-like document, which pointed out that the object of the railway was "the establishment of a safe and cheap mode of transit for merchandise," was issued on October 29, 1824, and it gave a hard knock at the canals, saying they were altogether inadequate to the regular and punctual conveyance of goods, inasmuch as "in summer time there is frequently a deficiency of water, obliging boats to go only half loaded, while in winter they are locked up sometimes for weeks together."

The Bill was brought before the Committee of the House of Commons on March 21, 1825, and supported by notable manufacturers and merchants, such as Birley, Potter, Sharpe, and Garnett, of Manchester; and Robert Gladstone, Sanders, Lawrence, Ewart, Ellis, Moss, and Cropper, of Liverpool. Against it were arrayed many eminent counsel, chiefly representing the canal interest, and the fight was a stubborn one. The license of language was greater seventy years back

than it is now, and the counsel, in his opening speech advocating the construction of the railway, adverted to the working of the locomotives on the iron tracks at Hetton and Killingworth, and sarcastically observed that none of the evil consequences prophesied had resulted from the use of steam in land carriage—that “horses had not taken fright, nor cows ceased to give milk, nor ladies given premature birth to children at sight of these things going forward at the rate of four and a-half miles an hour.” The barristers on the other side strove in vain to bewilder George Stephenson; though he occasionally embarrassed them by his Northumbrian accent. He was questioned as to whether the locomotive would not terrify the horses on the highway and at the plough? if he did not know as a fact that an engine had blown up and killed its driver? and if the waggons, top-heavy with goods, would not upset at a sharp curve? It was at this inquiry that the familiar railway anecdote about the relative strength of the locomotive and the cow originated.

“Suppose, now, one of these engines to be going along a railroad at the rate of nine or ten miles an hour, and that a cow was to stray upon the line and get in the way of the engine; would not that, think you,” asked the barrister, “be a very awkward circumstance?”

“Yes,” replied George Stephenson, with his face in a humorous pucker, “very awkward indeed—for the cow!”

The strangest objections were taken to the loco-

motive he had fashioned; perhaps the most remarkable being that it would become utterly helpless in stormy weather—"that any gale of wind which would affect the traffic on the Mersey would render it impossible to set off a locomotive, either by poking the fire or keeping the pressure of the steam till the boiler is ready to burst." The wind, shrieking over the wild waste of Chat Moss, was a zephyr's sigh compared to the howl made by the opponents of the line that was to traverse this boggy land. "No engineer in his senses," said Francis Giles, one of the experts of the time, "would go through Chat Moss if he wanted to make a railroad from Liverpool to Manchester." The place was described as a pulp, a quicksand, a morass, over which no railway could be safely made; and Mr. Alderson, in a speech that lasted two days, indulged in much imagery in opposition to the project, emphatically declaring: "I have heard of culverts which have been put upon the Moss, which, after having been surveyed the day before, have the next morning disappeared; and of a house—a poet's house, who may be supposed to be in the habit of building castles even in the air—going down storey after storey; as fast as one is added, the other one sinks! There is nothing, it appears, except long sedgy grass and a little soil to prevent its sinking into the shades of eternal night."

The preamble of the Bill was proved by a majority of one; but on consideration of the clauses the opponents of the project could not avoid chuckling. The clause giving power to the company to construct

the railway, and another authorising the promoters to secure land for the purposes of the line, were decisively rejected, and the Bill was reluctantly withdrawn. But the scheme was by no means dead. Another application was made to Parliament, upon a more careful survey by Charles Vignoles, the civil engineer, who went down from London to Liverpool, in July, 1825, by coach, being twenty-four hours on the way and paying four guineas for his fare. He "spent his first week in examining the plans of the 'old line' as well as the ground over which it was to pass, and in suggesting various improvements." George Stephenson's route was from Manchester, by Eccles, over Chat Moss, through St. Helens and Knowsley, entering Liverpool from the north. Vignoles, on the other hand, gave a wider berth to Lord Derby's domain, and proposed to enter Liverpool by a tunnel under Edge Hill. The new Bill went into Committee, the preamble was proved, and the third reading carried by a large majority, but not with much gravity, for Sir Isaac Coffin, seconding the motion that the Bill be read that day six months, convulsed the House by solemnly asking "if hon. members would consent to see widows' premises invaded by locomotives, and a railway under everybody's parlour windows?"

The Bill passed easily through the House of Lords, only Lord Derby, practically, dissenting. George and John Rennie had been appointed engineers of the line, but they relinquished the position, George Stephenson being selected as chief constructive engineer, and

getting to work immediately. He was a believer in the French proverb: "*Vivre ce n'est pas respirer, c'est agir*;" and he turned up his sleeves and commenced the work of draining Chat Moss.

The dreary waste was supposed to be a relic of the Deluge. It was more melancholy in its sombre nakedness than "The Valley of Desolation" in Yorkshire, which has the expanse of its grass and weed broken by the gnarled trunks and bare branches of storm-riven oaks. When the engineer tackled the Moss he found that it was a voracious fiend. It engulfed and swallowed everything—ballast, casks, and hurdles sank, as predicted by the counsel against the railway, into "the shades of eternal night." The directors became uneasy and then disheartened, and summoned a meeting to decide whether it would not be best to abandon the wild project. "We must persevere," said George Stephenson grimly, secretly enraged at the illimitable appetite of the Moss, which seemed to have a greater devouring capacity than "The Dragon of Wantley," and annoyed at the remarkable stories told on 'Change and elsewhere in the two cities as to the sinking of men and the disappearance of horses in the bog. At last he managed, by means of the hurdles interwoven with heath, to make a floating platform, which formed a foundation for his embankment, and "in six months from the day on which the Board had held its special meeting on the Moss to consider whether they should give up the line, a locomotive engine and carriage passed over the very

spot with a party of the directors' friends on their way to dine at Manchester."

The road over Chat Moss cost little more than the passage of the Bill through Parliament. The one cost £28,000, and the other £27,000; but the Chat Moss track cost its engineer a good deal in anxiety and heartache. In 1828 the directors again got restive. No less than £460,000 had been expended on the line, and there was apparently no prospect of its completion.

"Now, George," said Cropper, one of the directors, in 1829, "thou must get on with the railway and have it finished without further delay; thou must really have it finished by the beginning of the new year."

"Consider, sir," replied George Stephenson, "the heavy character of the works, and how much we have been delayed by want of money, not to speak of the wet weather. It is impossible."

"Impossible!" retorted Cropper, "I wish I could get Napoleon to thee—he would tell thee there is no such word as 'impossible' in the vocabulary."

"Tush!" said George Stephenson contemptuously; "don't talk to me about Napoleon! Give me men, money, and materials, and I will do what he couldn't do—drive a railroad from Liverpool to Manchester over Chat Moss!"*

Additional money was raised and the work pushed on with redoubled vigour. There is a good deal of talk about the fierceness of competition, high pressure in

* "The Life of George Stephenson," by Samuel Smiles.

business, overwork, and shattered nerves ; but it is doubtful whether many persons with the modern facilities of locomotion, the machinery helps to industry, and the scientific aids to commerce, really know what hard work is. At all events, there are comparatively few men who would be eager to accept such a toilsome burden, mental and bodily, as George Stephenson bore during these early days of railway construction. For him there was no such luxury as an eight-hour day. Nearly always he rose at dawn. Often he would ride miles to inspect some part of the line before breakfast. At the little inn at Sankey, whenever he cantered down in the morning to watch the progress of the viaduct, he made his own breakfast—a bowl of oatmeal porridge and milk—a frugal meal that would now be considered rather an insufficient foundation on which to build a day's toil. All day he was going by the railway, pointing out defects and suggesting improvements ; or he was busy designing or overlooking the construction of plant.

At night, after his plain, wholesome dinner, he only gave himself the leisure of a doze, and then dealt with his letters, got out plans and sketches, and worked at the infinite number of details that arose out of the making of the line and required immediate attention. Even in bed the railway ran right through his tired brain ; and it is not improbable that when his mind was, as it were, in the borderland between wakefulness and sleep, many useful ideas flashed into it with regard to mechanical contrivance. Whatever problems he may have solved in the night, he never

lessened his efforts by day. In the summer of 1829 he had the satisfaction of seeing the tunnel at Liverpool finished, lit up with gas, and a curiosity to the countryside ; and on September 15, 1830, in the presence of the Duke of Wellington, then Prime Minister, and a great multitude, he had the delight of opening the line, of traversing his own work, with his hand on the lever of the engine “Northumbrian.”

CHAPTER III.

REMARKABLE LOCOMOTIVES.

By Rail from Manchester to the Sea—The Liverpool Merchant's Rash Vow—A Crop of New Projects—Horse-Power and Steam—A Grotesque but Significant Race—Success of the "Rocket"—Huskisson's Death—A Procession of Locomotives—Primitive Railway Carriages and Exciting Journeys—A Family Coach Left in a Tunnel—The Romance of the Line—A Murderer's Leap from the Express : Dramatic Struggle, Escape, and Re-capture—Novel Experiences of Travellers—An Actress on an Engine-Footplate—Helping the Driver of the Night Mail—A Considerate Rebuff—"Two's Company ; Three's None."

THE success of the new line was even greater than that of the Stockton and Darlington Railway. It cost £1,200,000, a sum far beyond the original estimate, yet it paid eight per cent. The Spanish saying, "A silver mine brings misery ; a gold mine, ruin," was at fault so far as related to this railway. It proved a steadily-working gold mine that ruined no one, and greatly enriched the north-western part of the country. The first year the railway was opened its passenger traffic yielded £101,829, a great deal more than had been expected, and its goods traffic £80,000, though the most sanguine hope of the promoters was that the receipts for the transit of merchandise would amount to £50,000.

The gratifying outcome of the undertaking produced a feverish longing in many to dabble in railway construction, working, and profit. There was less curling of the lip and sneering, and the Liverpool merchant who, prior to the opening of the line, said, "It has

been proved to be impossible to make a locomotive engine go at ten miles an hour, but if it is ever done I will eat a stewed engine-wheel," conveniently forgot his rash vow. "Lines were soon projected," wrote Sir George Findlay, the late general manager of the London and North-Western Railway, "between all the towns of any note in the kingdom, and even between remote villages. One enthusiast went so far as to propose a railway under the sea between Dover and Calais, and was no doubt looked upon as a fitting candidate for a lunatic asylum, but probably the distinguished promoter of the Channel scheme of to-day may hold a different opinion on that point. The most important result that immediately followed, however, was the revival of the scheme which had previously been mooted, but had been abandoned, for the construction of the railway between London and Birmingham."*

Before this confidence in railways arose, however, there was prolonged misgiving as to the motive-power to be used upon them. The Act granted for the construction of the Newcastle and Carlisle railroad in 1829 set forth that horses only should be used; and more daring speculators, eager to dabble in railway projects, hesitated to adopt travelling locomotives, though they fully recognised the advantages of fixed engines. Nothing except a locomotive would satisfy George Stephenson. The horse and the fixed engine were to

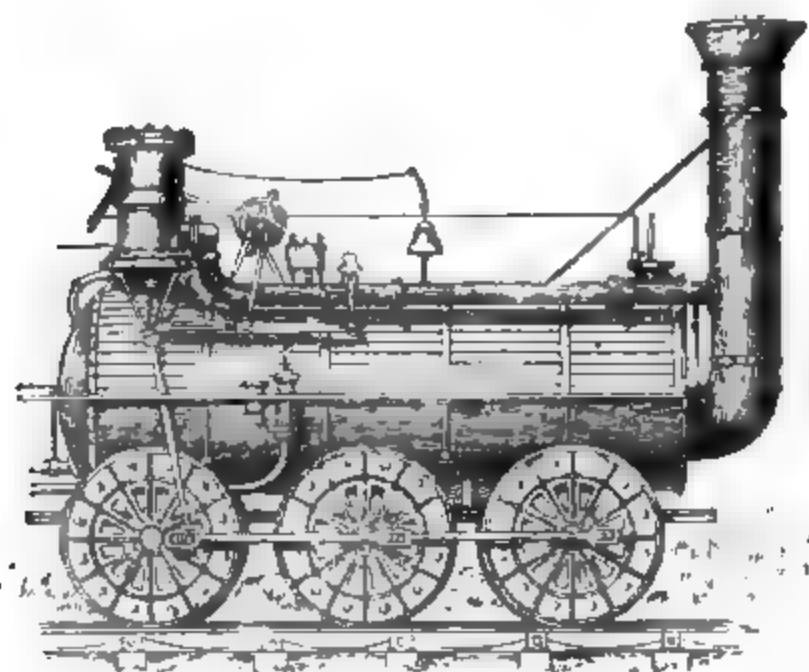
* "The Working and Management of an English Railway," by George Findlay.

his progressive mind getting obsolete as train-movers. Ignoring ridicule and contempt he urged that the locomotive should be the motive-power on the Stockton and Darlington Railway; and at last the directors decided to offer a prize of five hundred pounds for the best locomotive—an engine that would run well and drag a load. Among the conditions were: that the engine should consume its own smoke, that it should be capable of drawing day by day twenty tons weight at the rate of ten miles per hour, and that it must be delivered at the Liverpool end of the railway on October 1, 1829. The trial was fixed to take place at Rainhill on October 6, and four engines were entered for the competition:—

1. Braithwaite's and Ericsson's "Novelty."
2. Timothy Hackworth's "Sanspareil."
3. Stephenson's "Rocket."
4. Burstall's "Preseverance."

The entries rather remind one of a race-card at "The Derby" or "The St. Leger." The trial, in some of its features, did not differ from these race-meetings. There was a great crowd, there excitement, shouting, and betting galore. There was a stand for the ladies, and the whole countryside turned out to witness the unprecedented competition. A preliminary canter only was taken by the "Rocket," the "Novelty," and the "Sanspareil." The "Novelty"—which was appropriately named, for the air was driven through its fire by bellows—astonished the spectators. It went, on one part of its journey, at the rate of

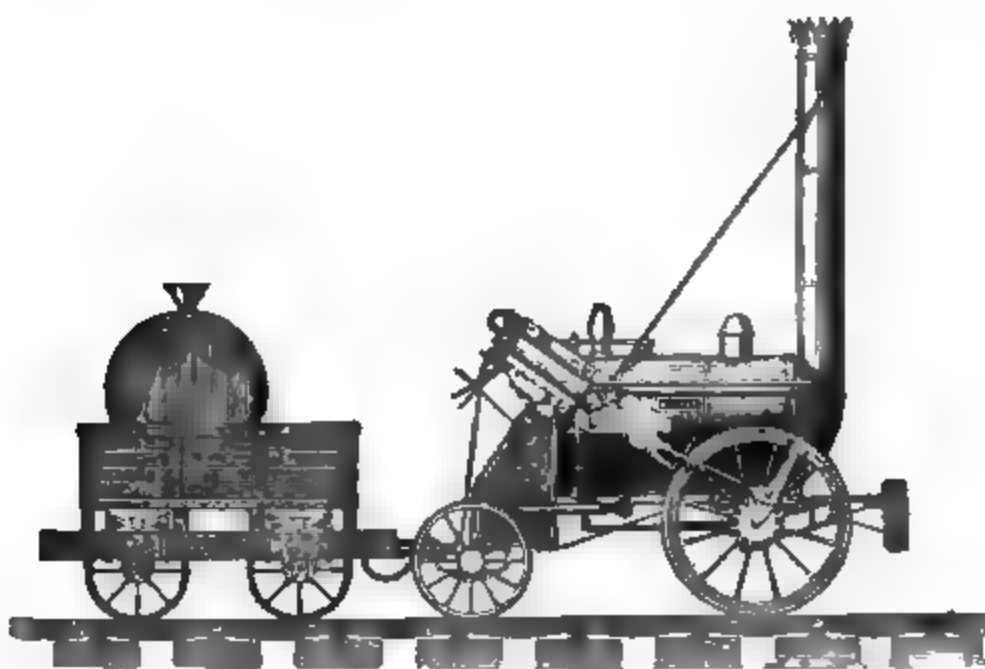
twenty-four miles an hour; but its career, though brilliant, was short, inasmuch as its bellows collapsed the next day, and this mishap was followed at subsequent trials by the bursting of its forcing-pump pipe and another breakdown. The "Sanspareil" did little



HACKWORTH'S "SANSPAREIL"

in the way of travelling, but caused some diversion by the startling blast from its chimney; nor did the "Rocket" conspicuously distinguish itself, looking ungainly in build, clumsy on its wooden-rimmed wheels, and requiring fifty-three minutes to run twelve miles. But on the following day the "Sanspareil," like the "Novelty," was unable to compete, and the "Rocket" had the track to itself. Linked to a coach containing thirty passengers, it now was able to make a speed of from twenty-four to thirty miles an hour; and the next day, when it made its trial in earnest, travelling

backward and forward on a marked stretch of road, the engine, dragging thirteen tons weight, ran thirty-five miles in an hour and forty-eight minutes, its highest speed on the trial trip being at the rate of twenty-nine miles per hour.



THE "ROCKET."

Mishaps to the "Novelty" and the "Sanspareil" continued, and they failed in the competition. The "Sanspareil," nevertheless, was not without merit, and in later years did some useful work. It has been described as "a wonderful little engine"—it certainly was a curious-looking one compared to the express passenger-engine that now dashes on many a track. Its funnel was filled with fury; its steam blast was so fierce that it blew burning coke high into the air; its boiler was a mechanical curiosity, and its fuel a few barrowloads of coke. The driver—who, like the cricketers in olden time, wore a tall hat—stood on

the buffer-plank in front of the engine ; but the fireman, also in a tall hat, rode on the footplate at the back of the whimsical locomotive, which went through such grotesque antics at the trial that it frightened the driver and he gave in. The "Perseverance" did not possess much of the quality that is supposed to be akin to genius. It was only capable of moving at the rate of six miles an hour, and slowly backed into obscurity.

Practically the "Rocket" was the only engine in the race ; it almost had a walk over, and on October 14, in the presence of another great crowd, was awarded the prize. Then it really showed its pace. George Stephenson brought the engine on the line "detached from all incumbrances, when, in making two trips, it was found to travel at the astonishing rate of thirty-five miles an hour." The "Rocket" did eight years' useful work on the Liverpool and Manchester Railway, and afterwards ran on the Midgeholme line, one of its most notable journeys being the conveyance of the Alston express, containing the result of Major Aglionby's victory in East Cumberland, from Midgeholme to Kirkhouse, when it ran four miles in four-and-a-half minutes. The old engine, which later came into the possession of its maker again, and was for a long time in Stephenson's locomotive works at Newcastle-on-Tyne, has now standing-room in the South Kensington Museum, and is an interesting example of the early struggling and achievement of mechanical skill.

The opening of the Liverpool and Manchester

Railway was shadowed by the accident to Mr. Huskisson, who had been President of the Board of Trade and Colonial Secretary. "The 'Northumbrian' engine,"



MR. HUSKISSON.

says Dr. Smiles, "with the carriage containing the Duke of Wellington, was drawn up on one line in order that the whole of the train might pass in review before him and his party on the other. Mr. Huskisson had alighted from the carriage, and was landing on the road, along which the 'Rocket' engine was observed rapidly coming up. At this moment the Duke of Wellington, between whom and Mr. Huskisson some coolness had existed,

made a sign of recognition and held out his hand. A hurried but friendly grasp was given, and before it was loosened, there was a general cry from the bystanders, 'Get in! get in!' Flurried and confused, Mr. Huskisson endeavoured to get round the open door of the carriage, which projected over the opposite rail, but in so doing he was struck down by the 'Rocket.' His first words on being raised were, 'I have met my death,' which, unhappily, proved too true, for he died that night in the parsonage of Eccles."


At the railway opening ceremony there was a procession of no fewer than eight engines:—

1. The "Northumbrian," driven by George Stephenson.
2. The "Phoenix," by Robert Stephenson, his son.
3. The "North Star," by Robert Stephenson, George's brother.
4. The "Rocket," by Joseph Locke.
5. The "Dart," by Thomas Gooch.
6. The "Comet," by William Alcard.
7. The "Arrow," by Frederick Swanwick.
8. The "Meteor," by Anthony Harding.

The procession was a significant one. Never had such an array of locomotive power been seen in England or in the world. The spectators were amazed. The railway and its engines were a revelation, especially to two Edinburgh engineers, who, going down to inspect the line, marvelled not merely that the locomotives should travel so fast, but that the passengers were not dismayed, remarking that at the highest speed of twenty-five miles an hour, they could observe passengers, among whom were a good many ladies, talking to gentlemen, with the utmost *sang froid*!

The English people can easily adapt themselves to any new development, and they soon became accustomed to railway travelling. They crowded into the clumsy carriages, which were little superior to the goods waggon of our own time. A train of 1830 was certainly a strange conveyance, and though it got over the ground quickly in comparison to the stage-coach, did so with a minimum of comfort to the passengers. The vehicles were all christened with romantic names, somewhat after the fashion that obtained in the coaching days; but they jolted a good deal of the romance out of the traveller, whose attention, particularly in the doorless carriages, was always well occupied at the curves and crossings in preventing disaster to himself. The majority of the carriages were open at the sides, and the rude awnings, which were neither ornament nor protection, were sometimes carried away altogether by the playful wind. The "first-class and mail" train was rather more liberal in its accommodation, for it was better seated, entirely covered in, and packed its luggage on the roof; but there was a grotesque look even about this aristocrat of locomotion, with its enormously high engine funnel, and rattling, bouncing carriages piled with luggage, its guard in scarlet cloak perched aloft at the back of the last passenger carriage, and behind—on a truck, perhaps—some family carriage filled with a decorous or boisterous party who had temporarily dispensed with horses, preferring the novelty of a journey by rail.

The practice of riding in a family carriage hoisted on



- a truck became common to those able to afford the luxury ; and an exciting story is told of one passenger who insisted, not many years ago, against the advice of the railway officials, in riding in this way to Brighton. His carriage was placed on a truck, he leaned back in the favourite corner of his equipage, and, well wrapped, anticipated a secure, comfortable journey. “ In the Balcombe tunnel the truck, which was the last vehicle, became disconnected. The unfortunate occupant, perceiving the train leaving him, called after them, but in vain ; and finding they proceeded on their journey he became dreadfully alarmed, being afraid to alight, and not knowing whether in a few minutes he might not be dashed to pieces by the next train. He had not been long in this suspense when an engine entered the tunnel, puffing away and the whistle screaming. He now considered his doom sealed ; but the engine proved to be a pilot one sent to look after him, the truck and carriage having fortunately been missed on the train arriving at the next station. The carriage and occupant were then conveyed to Brighton, where they arrived soon after the train, and the only damage was the great fright the passenger sustained.”*

The railway and the train, at which some people shudder as being too ruthlessly practical, making havoc with the beauty of the land, by “ the ghastly precision of their destroying force,” are really inseparable from romance. They have become the theatre of human life, revealing every phase and passion of it throughout

* “ The Railways of England,” by W. M. Acworth.

the whole comedy and tragedy of existence. No writer of fiction, for instance, has ever given a parallel to the dramatic fact that Charles Peace provided in his daring leap from the express. The murderer and burglar, who was one of the most startling products of modern society, was taken, on January 22, 1879—after his capture by Sergeant Robinson on the lawn in St. John's Park, Blackheath—by train on his way to Sheffield, where he was to undergo examination before the magistrates for the murder of Arthur Dyson, civil engineer, at Banner Cross.

The notoriety of the criminal had become almost the country's talk. His resource and daring were on everybody's tongue. "It would be a funny thing if he escaped," said a spectator, chatting to an official in the Sheffield Police Court, which was crammed with a crowd waiting in eager expectation for the prisoner's arrival. Scarcely were the words uttered than there was an indescribable flutter in the Court, much whispering, and many serious faces. Charles Peace had escaped! All the way down from Pentonville the man, who was restless, savage, and snarling, just like a wild beast, gave the warders continual trouble. When the Great Northern express was speeding through the pastoral country a little north of Worksop, Peace, jibing and sneering at his gaolers, sprang to the carriage window and took a flying leap out of the express. But his panther-like action availed him little. The under-warder seized him by the left foot as he leapt from the compartment, and held on with desperate grasp. The

other warder tugged at the communication-cord, but it would not act.

On went the express by field and homestead, the driver unaware of the fierce struggle behind. Peace, suspended head downward, with his face banging now and then against the oscillating carriage, tried with his right leg to kick himself free from the warder's grip. The struggling attracted the attention of the passengers, but they could do nothing to assist the warder, who, with every muscle quivering, was straining with his writhing prisoner. Shout after shout passed from carriage to carriage, only to be carried miles away by the wind; the noise of the clamouring travellers simply made strange echoes in the driver's ears. For two miles the struggle went on; then Peace, determined to end it, whatever the result to himself, wriggled his left foot out of his shoe, which was left in the warder's grasp, and at last he was free. He fell wildly, his head struck the carriage footboard with tremendous force, and he bounded into the six-foot, where he rolled over and over, a curious bundle half enveloped in a cloud of dust.

Still onward sped the train, the warder, helpless to secure his prey, craning his neck as far as he could out of the carriage window, his face a study of rage and concern because he had been outwitted. Nearly another mile was covered before the express pulled up. No time was then lost in chasing the fugitive. The warders, accompanied by several passengers eager for adventure,

ran back along the line and found Peace in the six-foot, not far from the place at which he made his reckless descent from the train. The man was lying near the down track, a huddled heap, unconscious, with a serious wound in his head. He was not merely a person of amazing unscrupulousness, but of wondrous vitality, and he soon recovered sensibility, murmuring, as he was lifted into the guard's van of a goods train for removal to Sheffield, "I am cold; cover me up." The warders were only too pleased to cover him up; they took every care of him. When he was conveyed to Armley in readiness for his trial they were armed with revolvers; but the "small, elderly-looking, feeble man, in brown convict-dress," made no further attempt to escape. He was sentenced to death at Leeds assizes and hanged, no one regretting the hardened criminal's doom.

The incident of the line in the early days of railway travelling was hardly so thrilling as Charles Peace's exploit, still it was full of novelty. It was no unusual experience for a passenger to sustain injury in jumping off the train to run after his hat; or to be jolted upon the track while rashly endeavouring to ride balanced on the rim of the waggon, or to get his head broken in contact with some bridge, even after warning by the guard that it was perilous to travel among the luggage on the carriage-top. A free-and-easy latitude prevailed, and the engine-driver, lord of his own footplate, used to allow his wife to ride upon it to market.

Fanny Kemble, the actress, was one of the few

women who have ridden on a locomotive, George Stephenson being the driver of the engine and her guard. "You cannot imagine," she wrote, "how strange it seemed to be journeying on thus without any visible cause of progress, other than the magical machine with flying white breath and rhythmical unvarying pace, between these rocky walls, which are already clothed with mosses, ferns, and grasses. . . . When I closed my eyes this sensation of flying was delightful, and strange beyond description ; yet, strange as it was, I had a perfect sense of security, and not the slightest fear. At one time, to exhibit the power of the engine, having met another steam engine, which was unsupplied with water, George Stephenson caused it to be fastened in front of ours ; moreover, a waggon laden with timber was also chained to us, and thus propelling the idle steam engine and dragging the loaded waggon which was beside it, and our own carriages full of people behind, this brave little she-dragon of ours flew on."

The "she-dragon" travelled thirty-five miles an hour, "swifter than a bird flies, for they tried the experiment with a snipe." The speed of engines, great as Fanny Kemble* thought it then, has been accelerated since, and no woman would be likely now to stand up with her bonnet off drinking the air before

* Fanny Kemble lived to see the development of railways and to note the increase of speed and the improvement in rolling-stock, for the eminent actress, who appeared in the character of an amateur engine-driver on the Liverpool and Manchester Railway in 1830, survived till 1893, dying on January 15, at the age of 83.

her on the footplate of a North express-engine doing the five hundred and forty miles from Euston to Aberdeen in twelve hours and fifteen minutes. In-



ON AN ENGINE.

deed, it is a difficult matter for anyone to get on the footplate at all now. The regulations of every company are dead set against such a privilege. The driver dislikes it; and the fireman hates it quite as much as Lord Bramwell hated a drunkard. The

responsibility is altogether too great to be lightly undertaken. It is a privilege that the writer has enjoyed, and at night too, when everything looked weird, when the shadows flung their gigantic limbs across field and river, and upon hillside; when the engine, plunging out of the chaos of the tunnel into the flash and darkness of the deep cutting, seemed to shape itself into one's idea of a fiery demon leaping with sardonic glee out of Tartarus, were it not for the respectable, contented look of Stubbs, the driver, who is so devoted to his work that he has not time to sin, and never thinks evil so long as he has plenty of fuel for his own stomach and for his engine.

But the privilege of riding upon a locomotive is not easily obtained. I had many disappointments before I was permitted, disguised as a fireman's help, in garments patterned with oil and coal dust, and with a face and neck dusky as though I had just come up a pit shaft, to step upon the footplate, and make a pretence of assisting Bob Gaunt, who, with a huge shovel, that seemed to carry nearly a half-cwt. of coal at every lift, was banking up the fire, amid the noise and bustle of the crowded station, and told me in confidence, and with a grin, as the carriage doors were banged to and the whistle sounded for away, that we were three minutes behind time, and he "reckoned she'd 'ave to 'urry a bit." No railway company likes to be otherwise than courteous, but they have to draw the line somewhere, and they draw it across the engine-step, as may be gathered from the following

letter which I received from the then general manager of the Midland Railway :—

“GENERAL MANAGER’S OFFICE, DERBY,
“January 9th, 1888.

“DEAR SIR,—The Secretary has sent me an extract from your letter in which you ask that you may be allowed to ride with the driver on the engine of one of our express trains. In reply I beg to say that there are such serious objections to strangers riding on the footplate of an engine, especially of an engine drawing an express passenger train, that we always decline to give the permission sought for.

“I am, yours faithfully,

“JOHN NOBLE.”

The letter is dignified and considerate. It says politely that the Midland Railway Company have no desire to see me commit suicide, or to bring disaster on the express by distracting the attention of the driver. The decision is a wise and proper one. After all, it is a ticklish business for a passenger, accustomed to the cosy corner and the easy glide of the railway-carriage, to travel sixty miles in an hour on an engine footplate, clutching grimly at the nearest thing for support, trying in vain to stand steadily on the vibrating floor that shakes every limb and muscle and nerve, and half-expecting every moment that the next fierce gust that finds itself impotent to check the engine’s progress will, in revenge, whirl him off the footplate into eternity.

The improved engines that followed in the wake of the “Rocket” indulged in few antics, and were for the most part hard-working locomotives, soon realising the fact that a railway is not a place for diversion.

The "Planet" and the "Samson" did excellent work, and the former, which drew the first load of merchandise from Liverpool to Manchester, was a capital puller, dragging eighty tons the whole distance in two hours and thirty-nine minutes; but compared to the express-engine, with its resistless power, its great speed, and punctuality, these machines were playthings. The express-engine is a proud, stately giant, scorning frivolity, and thoroughly absorbed in its daily or nightly duty. It needs firm, grave, steady guidance. It is obedient to the shrewd, intelligent driver, with his strong hand on the brake or his fingers on the regulator, and his eyes on the glass disc; but it brooks no nonsense, and by the rude shaking it gives every stranger, hints that on the footplate, as in courtship, "Two's company: three's none."

CHAPTER IV.

RAILWAY SURVEYORS AND THEIR ADVENTURES.

Humorous Scene at St. Helens—More Railway Enterprise—The Chain-bearer's Retort—The Track towards London—An Obliging Train—Surveying the First Line to Town—A Countess and her Prejudice against Railways—What would Become of Mansions and Parks—The Unlucky Fate of Canals—The Gloom and Mystery of Tunnels—Sir Edward Watkin and Woodhead Tunnel—The Effect of Tunnel-air on the Passengers' Health—A Scientific Railway Ride—Adventures of Railway Surveyors—The London and Birmingham Line—Peers and Profit—A Town's "Barbarous Fury"—The Perils of Tunnel-making—A Brave Engineer—How to Go Through a Tunnel—A Costly Railway.

CAPITAL saw another source of profit in railways, and money for new projects was easy to obtain long before the "Rocket" had finished its work on the Liverpool and Manchester line. Such eagerness was shown to secure scrip in the Runcorn Railway, for instance, that the entire capital was readily subscribed in the locality, and at the "Fleece" Inn, at St. Helens, where the first subscriptions for shares were received, it is recorded that some of the applicants who could not get near enough to sign their names crept under the table, and, emerging on the other side, secured the chance of having their names enrolled as proprietors in the scheme!

Many lines were made, and some projects were abandoned. A tiny railway, six miles long, and worked by fixed engines, was opened between Canterbury and Whitstable. A branch line was constructed from Bolton

to Leigh, in Lancashire. Another was made to Wigan ; and, during the survey, Vignoles, the engineer, was defied, with some humour, by his chain-bearer. The man was entrusted with a valuable theodolite, and told to carry it with the greatest care. "Is it all right now?" he said despairingly, after a sharp reminder that he was not holding it properly. "It is," said Vignoles, "and, on your life, don't let it fall!" "Ay! very well," said the chain-bearer, placing the instrument on the ground as tenderly as if it were a sleeping infant; "but as it's all right now, I'll be d—— if I have owt to say to it, and you may carry her yoursel'!" The branch to Wigan, notwithstanding the chain-bearer's indignation, was made, and afterwards extended to Preston; both towns, in touch by rail with Manchester and Liverpool, greatly developing their markets for coal and cotton. Preston, notable to travellers because of its pretty park by the Ribble side, has become an important railway centre, and several lines run into its fine station; yet it is only a few years since the haulage of the old tramway that ran down to the Leeds and Liverpool Canal, was taken from Avenham Brow, and stage-coaches, carrying the mails, rumbled through the streets. A number of Manchester men sought power to construct a railway from that city to Oldham, and an Act was obtained; but unfortunately it brought little benefit to anyone, especially as it made the remarkably comprehensive declaration that the track would be "for the use of coaches, chariots, chaises, cars, landaus, gigs, waggons, carts, or other carriages."

An evidence of the conflicting emotions that surged in the breasts of the canal proprietors was afforded by the action of the holders of stock in the Manchester, Bolton and Bury Canal. They decided, in 1831, to stop up the canal between Bolton and Bury, and to construct a railway by its side. The thought then impressed them that it would be foolish to close the waterway, and they resolved to run a line alongside its whole course; but later they altered the route, giving the canal on one stretch a very wide berth, and the railway from Manchester to Bolton was not opened until May 29, 1838, the branch to Bury being abandoned and the town remaining for many years without railway communication.



STATUETTE OF VIGNOLES (STAT. 76).

It was rather to the South than towards the North that railway enterprise resolutely turned. The ancient, reed-fringed Sankey Canal, cut as far back as 1775, took the heavy goods from St. Helens, and conveyed them with so many rests by the way that traders forgot their manners. Widnes—now the great producer of alkali, of an aroma with which no Continental city

would have the assurance to compete, and of an atmosphere that makes even hardy foliage shrivel up and die—was then a picturesque village, and even verdant. A railway was made from St. Helens, through this village, to Runcorn Gap; and the whole district rubbed its eyes like a sleeper awaking, and cogitated, and stretched itself into wider business activity, but only slowly. The soothing influence of the canal was still upon the people. The railway did not tempt them to leap into an age of hurry. The porter yawned at the little shed of a wayside station; the driver stood drowsily at his post on the engine; the train, though it walked away from the slow-moving barges, jogged and rattled along at no great speed. “The line was chiefly used for the transit of minerals, but there was generally a carriage or two for passengers; and occasionally when some of the travellers would reach the booking-office a little behind time, the station-master, handing them a slip of paper, which in those days served as the ‘ticket,’ would say to them: ‘Now hurry yourselves; she’s not long started, and if you look sharp you’ll catch her up!’”

A branch was constructed to Warrington, and the line carried on to Birmingham, under the style of the Grand Junction Railway; but the most important project of the time was one for the construction of a railway from this city of hardware to London. A survey was made in 1825, but the financial crash of that year, with its excitement, rage, and despair, turned men’s minds away from railway enterprise. In 1830,

however, two committees were formed at Birmingham, and working together in the trade interests of the Midlands and Lancashire, and having an encouraging heap of London gold at their back, decided to make a line running by Coventry to town. "The directorate," says Mr. John Francis in his "History of the English Railway," "was composed of mixed materials. The country and the London banker sat side by side with the provincial sharebroker. The directors of some of our most ancient London corporations went hand in hand with the Birmingham manufacturer. The chairman of one of our oldest insurance companies did not disdain the companionship of the Cheapside factor, and, to the honour of Robert Garnett, merchant of Manchester, be it recorded, that he was one of the largest contributors to this fine undertaking." George Stephenson was appointed the engineer, in association with his son Robert; and the two men were soon in the thick of the fight.

Many of the old foes to railway construction had been converted to friends. Even Lord Derby had repented of his folly and was in favour of the line. But the spirit of opposition was by no means dead. It sprang up in the most unlikely places, and made a very indignant protest. The old fables as to the sinister effects of a railway were revived, and many new stories were invented. The pessimists were busy again. They prophesied all sorts of disaster—grand old estates, where the deer grouped on the parkland, and where the ancient oaks stretched their gnarled

branches over copse and glade, over historic ground that had been undisturbed for centuries and had become hallowed because of association with legend, tradition, and chivalry, would have their loveliness rudely destroyed by the navy's pick. The Countess of Bridgewater was alternately pathetic and angry about the proposed invasion. She would almost have preferred a band of Danish warriors, wild, rugged, and barbarous, abandoning their boats on the nearest river and striding over the land, to a horde of navvies digging away the beauty of her park.

The farmers were fearful about damage to their crops. The innkeepers thought the roads would be deserted, and that their livelihood would be gone. The bargemen lifted their heads seriously out of the smoky cabins of their heavily-laden boats, and wondered, in curious dialects, what was to become of the canals. The dangers of railway travelling were almost breathlessly described and illustrated by imaginary incidents on the Liverpool and Manchester Railway, where, it was said, the locomotives had proved such engines of peril and such failures that they were about to be withdrawn.

It was out of the gloomy mysteries of the railway tunnel that opponents made the most capital; indeed, they had a good deal of reason on their side. No argument, however clever and persistent, can efface the fact that a tunnel is an unmitigated nuisance. It is a stubborn, obstinate nuisance that cannot be dispensed with, and does not seem amenable at present to

much improvement. The tunnel of to-day is more carefully constructed than some of the earlier underground ways; but it is an evil-smelling place still, and though invention and science have won brilliant triumphs in other departments of railway work, the tunnel—dark, stifling, repellent—is still open to a good deal of reform. If it is possible for the mining engineer to ventilate a pit, with its miles of roads running from the bottom of the shaft to the far-away banks and headings, surely it is possible to ventilate a tunnel!

Perhaps the day is coming when the Guibal fan, or some other appliance, will drive away the foul air with a gust like a strong breeze at sea, and when the tunnel will be dazzling with the electric light; but in the meantime it is, in many instances, a disheartening burrow, with sodden floor and damp wall and lichened arch, beneath which noisome vapours linger; and when the express comes boldly into the underground way, with its flaring lights and deafening noise, the engine indulges in cruel frolic, flinging prodigally out of its funnel smoke of every hue, from black to purple and from purple to saffron, until the tunnel is a choking chaos, and in every compartment of the speeding train some passenger is holding his breath, or covering his mouth with his pocket handkerchief, or cursing the railway company, or crying "For Heaven's sake, shove the window up. Do you want us to be poisoned?"

No one would dream of travelling through Woodhead tunnel, between Manchester and Penistone, as a

mere holiday pastime. It is secure enough as a fabric, but its odour is vile. It is an odour that you can taste as well as smell, a flavour that might possibly be approached by drinking cheap port. Lord Wharncliffe, one of the directors of the Manchester, Sheffield and Lincolnshire Railway, on his way from Wortley, his Yorkshire place, to the board meeting at Manchester, has no doubt pulled many a wry face on going through this tunnel. Sir Edward Watkin, late chairman of the company, after adroitly pacifying the shareholders at the half-yearly meeting, and silencing with his imperturbable suavity that most inquisitive holder of stock, Mr. Wiles, of Sheffield,* has on his journey to town lost patience at Woodhead, and grumbled at the atmosphere of his own creating, and then coughed himself into a good temper again, emerging from the tunnel with his face in a humorous pucker.

Railway travellers in the main are a patient race. They undergo and bear a good deal for the sake of business or pleasure; and, after all, the tunnel, however foul, only arouses a temporary chagrin. But a tunnel half a century ago was not simply a necessary evil—it was a terror, and the opponents of the London and Birmingham

* Mr. Wiles, of Sheffield, was quite as noted in railway circles as “Mr. Brookes, of Sheffield,” in the fiction of Charles Dickens. He had faith in railways, for he held shares in all the great lines; but he was, though an estimable man, a scorpion to railway directors. His questions with regard to management and expenditure were as awkward as they were persistent; and Sir Edward Watkin always gave a sigh of relief when he had succeeded in satisfying or silencing “our energetic friend Mr. Wiles.” The verbal warfare has ended. Mr. Wiles has been silenced by death; and the hon. baronet, having at last got Parliamentary sanction for the extension of the Sheffield line to London, has resigned.

Railway used it cleverly to work on the fears of the people. It was a dread place, in which there was more peril than in the lion's mouth. Even if the passenger escaped accident and death, he was liable to a chill in this damp, reeking, underground way, that would inevitably bring him into consumption. If he managed to get through without a chill, the shock to his nervous system by this new mode of journeying in the dark, in noxious air, amid strange noises, would be severe enough to undermine the strongest constitution. For years, in fact, the fear remained that tunnel-travelling was exceedingly dangerous to health ; and when the London and Birmingham line was almost completed, a special trip was actually made through one of the tunnels in order, if possible, to dissipate this fear, and to convince people that the clattering ride along deep cuttings and into the cavernous darkness did not necessarily mean palsy, plague, or sudden death.

Lieutenant Le Count gave an instructive description of the journey. "So much," he wrote, "has been said about the inconvenience and danger of tunnels, that it is necessary, while there are yet so many railways to be called into existence, to state that there is positively no inconvenience in them except the change from daylight to lamplight. This matter was clearly investigated and proved upon the London and Birmingham Railway, a special inspection having been made in the Primrose Hill tunnel by Dr. Paris and Dr. Watson, Messrs. Lawrence and Lucas, surveyors, and Mr. Philips, lecturer on chemistry, who reported :

“ ‘ We, the undersigned, visited together, on the 20th February, 1837, the tunnel now in progress under Primrose Hill, with the view of ascertaining the probable effect of such tunnels upon the health and feelings of those who may traverse them. The tunnel is carried through clay, and is laid with brickwork. Its dimensions, as described to us, are as follows : height, 22 feet ; length, 3,750 feet ; width, 22 feet. The experiment was made under unfavourable circumstances, the western extremity being only partially open ; the ventilation is less perfect than it will be when the work is completed ; the steam of the locomotive was also suffered to escape for twenty minutes, while the carriages were stationary near the end of the tunnel. Even during our stay near the unfinished end of the tunnel, where the engine remained stationary, although the cloud caused by the steam was visible near the roof, the air for many feet above our heads remained clear and apparently unaffected by steam or effluvia of any kind, neither was there any damp or cold perceptible. We found the atmosphere of the tunnel dry, and of an agreeable temperature, and free from smell ; the lamps of the carriage were lighted, and in our transit inwards and back the sensation experienced was precisely that of travelling in a coach by night between the walls of a narrow street ; the noise did not prevent easy conversation, nor appear to be much greater in the tunnel than in the open street. Judging from this experiment, and knowing the ease and certainty with which thorough ventilation may be effected, we are decidedly of opinion that the dangers incurred in passing

through well-constructed tunnels are no greater than those incurred in ordinary travelling upon an open railway or upon a turnpike road, and that the apprehensions which have been expressed that such tunnels are likely to prove detrimental to the health or inconvenient to the feelings of those who may go through them are perfectly futile and groundless.'"

There were many obstacles to surmount before the Primrose Hill tunnel was built or any part of the line made. The survey of the railway was accompanied by nearly as much humorous incident as that of the Liverpool and Manchester Railway. Scowls and threats were the almost daily portion of the engineers. Again they had to work by stealth, using dark lanterns by night to complete the survey in which they had been checked by irate landowners and farmers by day. Their most bitter and unrelenting foe was a clergyman. He would not, at any cost, permit a lot of rough men, with strange instruments and mysterious antics, on his glebe. But the engineers were not easily daunted, and at last they cleverly outwitted him. "The extraordinary expedient was resorted to of surveying his property during the time he was engaged in the pulpit. This was accomplished by having a strong force of surveyors in readiness to commence their operations, and, entering the clergyman's grounds on the one side at the same moment that they saw him fairly off on the other, by a well-organised and systematic arrangement each man concluded his allotted task just as the reverend gentleman concluded his sermon ; so that before he left the church

the deed was done, and the sinners had all decamped." All the difficulties of obtaining a correct survey were eventually overcome by dogged resolution, persistent toil, and pedestrian feats ; the most notable walk being Robert Stephenson's, for he did the distance between London and Birmingham twenty times.

In January, 1832, the promoters issued their first circular, estimating the cost of the line at £2,400,456 and the revenue at £671,102. On February 20, in the same year, the Bill was read a first time in the House of Commons. Eight days later the second reading was carried by a majority of seventy-nine. No fault could be found with the engineering, and the House of Commons had the sense to see that the line would be of immense advantage to the home trade and probably a powerful weapon with which to fight foreign competition.

The Lords, not so far-seeing, and zealous in defence of what they considered their own interests, made the passage of the Bill a very stormy one. Nothing satisfied them. It was as difficult for the scheme to gain their goodwill as it is for a publican to get a licence from a bench of teetotal magistrates. They demanded proof that the company would be able to put a certain amount of traffic on the railway and to pay six or eight per cent. on its stock ; but some members of the Committee chiefly demanded money, for it was notorious that several of the peers sitting in judgment on the Bill were landowners through whose estates the line would run. The adjudicators on this important project consisted of the class that, according to Mr. Chamberlain, "toil not,

neither do they spin ; " but they revealed a remarkable business aptitude—a keen if lordly yearning for profit. Evidence was taken, pages upon pages of it. Witnesses were under examination for six days, and there were conferences with the ostensible object of getting the Bill through amicably ; but there was no limit to the avarice of the landowners, and the promoters indignantly declined to pay the enormous bribes coolly demanded to silence opposition. One little group of opponents offered to withdraw their opposition upon payment to them by the promoters of £10,000. The Bill, as everybody aware of the secret motive of the opposition expected, was rejected ; but the reason of its rejection was adroitly veiled.

The public smiled, sneered, and shrugged their shoulders, as the whim took them. The traders were angry. Lord Wharncliffe, who, as chairman of the Committee, had learned from the evidence that the railway was a necessity, fearlessly stated that the failure of the Bill must be attributed to the landowners. The promoters said little ; they had spent £32,000 in piloting the Bill half-way across the rough sea of Parliamentary opposition, and they felt bound not to be put back to port, but to pour oil on the troubled waters and steer boldly onward. Money was paid away with no niggardly hand, and at length the company were able to state that they had conciliated the most active and formidable of their opponents. Nevertheless, the process of conciliation was a very costly one. It meant the payment to the landowners of £750,000 ; and no less

than £72,868 was the price for getting the Bill through Parliament.

Nor was the opposition confined to the landowners. The farmers looked askance at the project, no longer believing, however, in the whimsical fiction palmed off on the Nantwich agriculturists a few years earlier, that if a bird flew over the district when the locomotive passed it would drop down dead! In the towns there was distrust of the railway, and in one case not only distrust but violent opposition. Sir Francis Head, in his book "Stokers and Pokers" says: "It is well known that one of the results of Robert Stephenson's elaborate investigation was that the London and Birmingham Railway ought to pass through the healthy and handsome town of Northampton. The inhabitants, however, urged and excited by men of influence and education, opposed the blessing with such barbarous fury that they succeeded in distorting the line viâ the Kilsby Tunnel, a point five miles off."

The opposition of Northampton, of which the town afterwards repented, led to much industrial difficulty and a great expenditure. It necessitated the construction of Kilsby Tunnel. To make a way nearly a mile and a-half long beneath the ridge was considered by many to be impossible; but after some idea of the strata had been obtained by sinking trial shafts, a contractor was found bold enough to undertake the work. The Midland Railway Company, in making their new line from the village of Dore, in East Derbyshire,

to Chinley, in the Peak, in order to get more direct communication between Sheffield and Manchester, have, tunnelling through moorland, rock, and by subterranean stream, met with great difficulties, the rush of water being so continuous in places that the men have been obliged to work in diver's dress. During the construction of the Severn Tunnel the workers were often in peril by the inrush of water, and the navvies had more than once to run for their lives. But neither of these works was ever considered a hopeless task. They have given a good deal of trouble and afforded considerable scope to ingenuity; but, unlike the Kilsby Tunnel, they have not bewildered the engineer and broken the contractor's heart.

The story of this tunnel-making is quite as romantic as the underground exploit told by Mr. Christie Murray in his novel "Joseph's Coat." "The work was in progress," writes Sir Francis Head, "when all of a sudden it was ascertained that at about two hundred yards from the south end of the tunnel there existed, overlaid by a bed of clay forty feet thick, a hidden quicksand which extended four hundred yards into the proposed tunnel, and which the trial shafts on each side of it had, almost miraculously, just passed without touching. The traveller in India could scarcely be more alarmed at the sudden sight of a crouching tiger before him than the contractor was at the unexpected appearance of this invincible enemy. Overwhelmed at the discovery, he instantly took to his bed, and though he was liberally, or, to speak more

correctly, justly relieved by the company from his engagement, the reprieve came too late, for he actually died! The question then arose whether, in the face of this tremendous difficulty, the execution of the Kilsby Tunnel should be continued or abandoned. The general opinion of the several eminent engineers who were consulted was against proceeding, and certainly the amount of difficulties which were subsequently incurred justified the verdict. But in science, as in war, the 'impossible' can occasionally, by cool and extraordinary exertions, be divested of its first syllable; and, accordingly, Robert Stephenson offering, after mature reflection, to undertake the responsibility of proceeding, he was duly authorised to do so. His first operation was of course to endeavour, by the power of steam engines—the comrades of his life—to lower the water with which he had to contend; and although to a certain degree this attempt succeeded, yet by the draining of remote springs, and by the sinking of the water in wells at considerable distances, it was soon ascertained that the quicksand in question covered several square miles.

“The tunnel, thirty feet high by thirty feet broad, arched at the top as well as the bottom, was formed of bricks laid in cement, and the bricklayers were proceeding in lengths averaging twelve feet, when those who were nearest the quicksand, on driving into the roof, were suddenly almost overwhelmed by a deluge of water which burst in upon them. As it was evident that no time was to be lost, a gang of workmen, protected by the extreme power of the engines, were, with

their materials, placed on a raft; and while, with the utmost celerity, they were completing the walls of that short length, the water, in spite of every effort to keep it down, rose with such rapidity that, at the conclusion



INTERIOR OF A TUNNEL.

of the work, the men were so near being jammed against the roof that the assistant-engineer, Charles Lean, in charge of the party, jumped overboard, and then swimming with a rope in his mouth, he towed the raft to the foot of the nearest working shaft, through

which he and his men were safely lifted into daylight, or, as it is termed by miners, 'to grass.'

"The water now rose in the shaft, and, as it is called, drowned out the works. For a considerable time all the pumping apparatus appeared to be insufficient. Indeed the effort threatened to be so hopeless that the directors of the company almost determined to abandon it; but the engineer-in-chief, relying on the power of his engines, prayed for one fortnight more. Before that period expired, Science triumphed over her subterranean foe, and, thanks to the inventors of the steam engine, the water gradually lowered. By the main strength of 1,250 men, 200 horses, and thirteen steam engines, not only was the work gradually completed, but during night and day for eight months the astonishing and almost incredible quantity of 1,800 gallons per minute, from the quicksand alone, was raised by Robert Stephenson and conducted away. The time occupied, from the laying of the first brick to the completion of the work, was thirty months. The number of bricks used was 36,000,000—sufficient to make a footpath from London to Aberdeen, missing the Forth, a yard broad!"

The construction of the rest of the line, which was 126 miles in length, was child's play compared with the grappling with this tunnel, for after the first day's work with the horse-gin in shaft-sinking, to the placing of the temporary props in the gradually-extending underground way, and the encounter with the quicksand and the deluge, there was not a moment free from

anxiety; but when the work was finished, Robert Stephenson could not do otherwise than feel a thrill of satisfaction at having fought and conquered the forces of Nature that had striven to overwhelm him.

It is impolitic to indulge in whims on a railway. However, travellers tire of monotony; and instead of taking their tickets and seats in ordinary, methodical, respectable fashion, passengers have been known to crawl beneath the carriage seats, to ride astride the buffers, and even to journey for miles clinging, at the imminent risk of death, to the rods underneath the engine. But it is seldom that they are rash enough to walk through a tunnel. Railway men, who know all about the track, about points and switches and signals, the meaning of every beat of a bell and move of a needle, and can interpret the language of every light, seem rather to prefer a walk through a tunnel. "It's a lot safer than being in the country in a thunderstorm," an inspector once remarked; and he was reproachful because I could not agree with him. There are three conspicuously dangerous things in this world: to go down a pit, to venture in a balloon, and to row out in a leaking boat, in a storm, to a wreck; but a walk through a tunnel is nearly akin to these hazards.

It is reassuring, on being dropped at the tunnel's mouth, after looking at some new mechanical appliance down the line, to hear the superintendent pleasantly say, "Good-bye; you'll manage all right through the tunnel. The station's just beyond." You start along the six-foot quite boldly. "It's nothing—going through a

tunnel," you think to yourself; but the darkness deepens, there are a score of flashing, bewildering lights, and the creak and jingle of moving wires. You wonder if you are really in the six-foot, and whether it would not be safer to hug the damp walls. Just as you have decided to cross the rails, you are checked by a voice that comes out of chaos: "Stand back, for your life, sir!" and the tunnel is in the throes of an earthquake. The ground shakes and trembles, the sleepers appear as if they were leaping off the ballast, the dust envelopes you in a cloud, and you reel again as the express thunders by. It is altogether an exciting experience; but it is wiser and more comfortable to go through a tunnel—even if it is only a short one, and the station is just at the other end—by train.

The shareholders in the London and Birmingham found their undertaking an expensive, some thought a ruinous, one. The railway seemed as though it had been transformed by some malicious fairy into a gigantic, selfish spendthrift. Its wants were insatiable; but there is an end, disastrous or gratifying, to everything, and on the 17th September, 1838, the track, on which five millions had been expended, was completed and opened for traffic; and in a year the investors had forgotten their doubts and fears, for the passenger-traffic alone yielded a substantial dividend.



THE QUEEN'S SALOON.

CHAPTER V.

"THE QUEEN ON HER TRAVELS."

Dr. Arnold's Opinion of Railways—The "Iron Duke" Distrusts the "Iron Horse"—Her Majesty's First Journey by Rail—How Emperors Travel—Something Like a Gift—A Quick Change of Apparel—The "Queen's Train"—A Royal Visit to Derby—Her Majesty's Anxiety for the Safety of Passengers—Precautions Down the Line, for the "Queen's Coming!"—Banks, the Signaller—The Royal Train to Scotland—One Hundred Journeys with the Queen—A Sad Railway Ride—Her Majesty on the Continent—A Czar's Risks in Travelling—Louis Philippe's Preference for the Stage-Coach—The Train Disaster at Versailles—Sydney Smith's Sardonic Letter on Railways

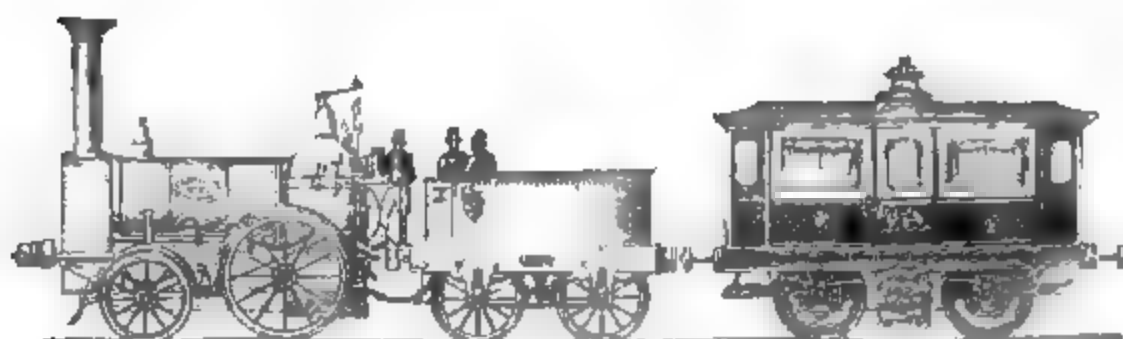
DR. ARNOLD of Rugby, thinking comparatively little of the business capacity of railways, expressed his satisfaction at the opening of the London and Birmingham line, because he believed in travel as the friend of civilisation. "I rejoice to see it," he said, as a train dashed by leaving only the echo of its mighty tread and the fantastic cloud of its trailing steam—"I rejoice to see it, and think that feudality is gone for

ever. It is so great a blessing to think that any one evil is really extinct." He took a somewhat sanguine view of the social power of the railway, for feudality, in one form or other, lurks in England still; but the railway has done a great deal towards breaking down class barriers, and the nobleman and the navvy have lately been passengers in the same carriage. Yet it is singular how prejudice against the railway lingered. "Nothing," said Mr. Berkeley, M.P. for Cheltenham, "is more distasteful to me than to hear the echo of our hills reverberating with the noise of hissing railroad engines, running through the heart of our hunting-country, and destroying the noble sport which I have been accustomed to from my childhood." Another hater of railways said he would rather meet a highwayman, or see a burglar in his own house, than have a surveyor with a theodolite sneaking about his land.

Fear also led to a distrust of railway travelling. Even the Duke of Wellington, who, on the field of Waterloo a few years previously, had sat a statuesque horseman, calm, cool, immovable, engaged in the grim chess of war, did not feel secure in a railway carriage, and looked upon the locomotive as a powerful but treacherous servant. This dislike, created no doubt by his vivid remembrance of Huskisson's death, continued for several years, and it was not until August, 1843, that he made his first railway journey, when he travelled on the South-Western Railway in attendance upon the Queen, and was announced to be perfectly reconciled to the new mode of travelling.

At this time her Majesty had made comparatively few journeys by rail. In fact, at the beginning of the previous year, she had scarcely entered a railway carriage at all. The *Morning Post* of February, 1842, says: "It is worthy of remark that her Majesty never travels by railway. Prince Albert invariably accompanies the Queen, but patronises the Great Western generally when compelled to come up from Windsor alone. The Prince, however, has been known to say, 'Not quite so fast next time, Mr. Conductor, if you please.'" Perhaps the Prince Consort, who had the gift of inspiring confidence, overcame the Queen's scruples. However this may be, the *Railway Times* of the 18th June in the same year, chronicles with some pride:—

"Her Majesty made her first railway trip on Monday last on the Great Western Railway, and we have no doubt will in future patronise the line as extensively as does her royal Consort. The Queen Dowager, it is well known, is a frequent passenger by the London and Birmingham Railway, and has more than once testified her extreme satisfaction with the arrangements of the company."



THE ROYAL TRAIN IN 1843—LONDON AND BIRMINGHAM RAILWAY.

Mr. Daniel Gooch—for he had not then laid the Atlantic cable and been created a baronet—was practically the first engine-driver entrusted with the care of the royal train, and he wrote in his diaries: “While I held the office of locomotive-engineer on the Great Western, I nearly in all cases took charge of the engine myself when the Queen travelled, and have been so fortunate as never to have a single delay with her, and she has travelled under my care a great many miles. I was the first who had such a charge, and it was some time before she had occasion to travel on any line but the Great Western.”

In the *Bucks Herald* of 1842 there is a description, not of a royal train, but of a royal station, readers of that journal being informed that at Slough, “the two rooms appropriated exclusively for the accommodation of royalty have just been fitted up with great splendour for the reception of those distinguished persons who will come by train to attend the royal christening.” The function—as the society papers would have been pleased to style the ceremony—that demanded so much preparation, even to the placing in the waiting-rooms of marble chimney-pieces of exquisite workmanship, surmounted with looking-glasses reaching to the ceiling, was the christening of the Prince of Wales; and the public were so interested in the fact that the future King of England was undergoing the ordeal of sprinkling that 6,375 passengers went from town to Slough, the Great Western running trains every half hour.

It is almost amusing to contrast this early diffidence of the Queen about railway travelling with her perfect trust in it now. Her Majesty is not fastidious with regard to her travelling coaches. She does not travel in a train of such luxury as the late French Emperor, whose express consisted of nine richly-appointed carriages and included a wine cellar and a conservatory of flowers. The late Czar eclipsed her Majesty in the sumptuousness of his railway travelling. He bought Napoleon's train, soon after the Emperor's capitulation at Sedan, adapted it to run on any gauge, enlarged it to fifteen saloons, and fitted it up as a sort of mansion on wheels, with every requisite according to a Russian's idea of home, perhaps the most lovely apartment in it being the Czarina's boudoir. Though the Queen's reign has been long and popular, and the gifts to her from all lands have been innumerable, no one seems to have thought of presenting her Majesty with a train.

She is less fortunate in this respect than the Emperor Francis Joseph, who, on June 2, 1891, inspected a handsome special train presented to him by the administrations of all the Austrian railways. The train, built at Prague at a cost of one hundred thousand florins, consists of eight vehicles. The imperial car, which runs the third from the engine, contains a sitting-room and bedroom beautifully panelled, and the ceiling, instead of being upholstered in silk, like the Queen's saloon, bears a pretty picture painted on the wood by an artist of Prague. In this

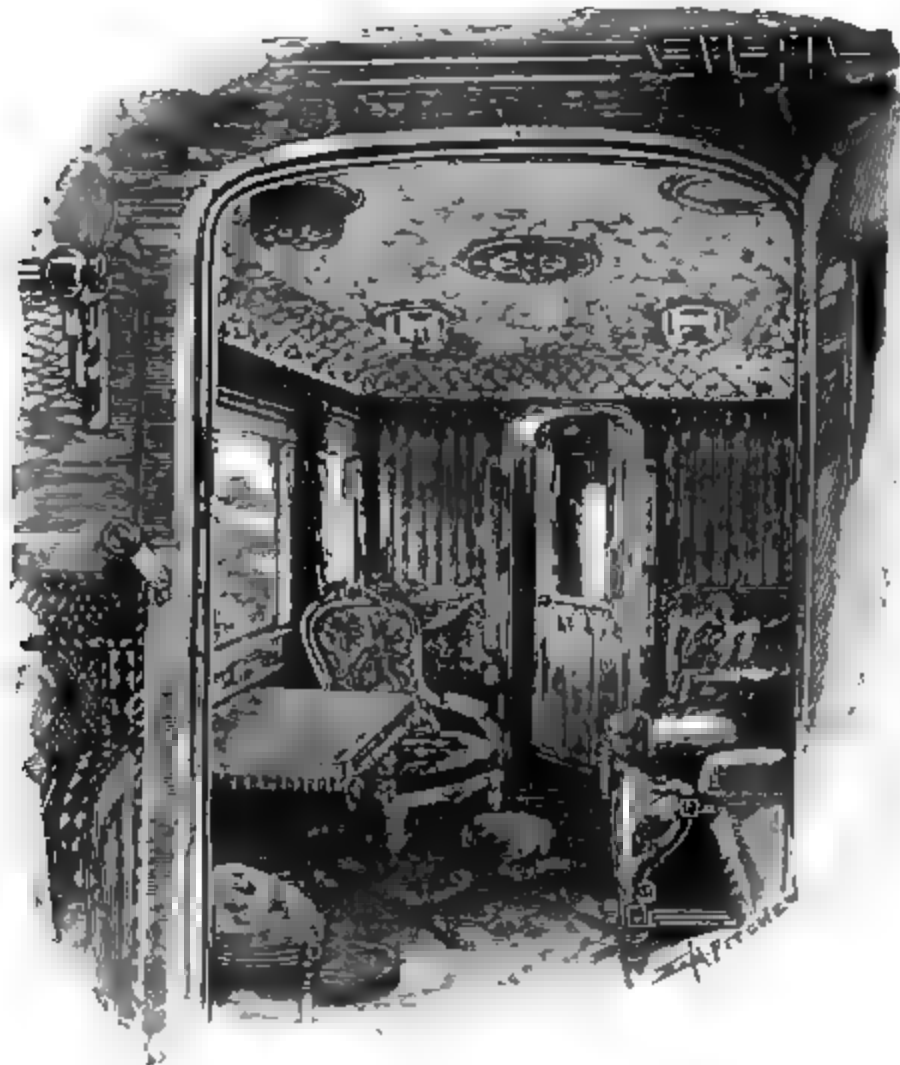
car, which is flooded with light, so large are its plate-glass windows, there is also a toilet and bath-room, a special room for the Emperor's aide-de-camp, and a small room for his henchman. The fourth car contains a sitting-room and a number of bedrooms for the suite, and the fifth car a dining-room to seat sixteen persons, and a smoking-room; the after-part of the train being made up of a reserve car for a larger suite, a coach which is practically the kitchen, and a car for the servants and luggage. The wearer of the eagle and crown is greatly pleased with his palace on wheels, especially as it is well-appointed, not lacking in anything; and he can if he chooses, on any line in his realm, imitate the volatile legerdemain of the German Emperor, who, on his visit to this country in 1891, entered the special train at the Great Western station at Windsor in a tweed suit—"for once out of uniform and dressed like a private gentleman"—and alighted from the carriage, on the arrival of the train at Paddington, attired in the "striking uniform of the Queen's Dragoons;" making a quick change that would have done credit to Henry Irving in his character in the "Lyons Mail," or to Teufelsdröckh himself, with all his knowledge of clothes, but was certainly bewildering to unimaginative people, who wondered how his Majesty had managed to leap out of the plain, unobtrusive garb of a civilian into a British officer's uniform.

Our Queen, though she sways the sceptre over a great empire, has not a railway train of her own. It is

practically only a composite in which she travels, made up of two saloons sacred to her use, and any other rolling-stock that may be needed. Her Majesty has chosen a sensible mean between the plain special of the late Emperor William, with its day saloon, study, and sleep-chamber, containing his favourite camp bedstead, and the richly-appointed train of the other emperor he overthrew. The saloons in which she travels are more than twenty years old; but they are, as an eager spectator remarked at Derby Station on May 21, 1891, when the "Royal Train" steamed in, "rare and comfortable." The first coach consists of her Majesty's sleeping apartment, and the second is used as the day saloon. They are upholstered in figured silk, and prettily draped and curtained. The sitting-room is furnished with a settee and easy chairs done in blue silk; near the windows are two or three little tables with reading-lamps, and on the hair-stuffed, thickly-carpeted floor a couple of footstools. The apartment, when the Queen is sitting by the window chatting or reading and there are books and papers about, does look homely, and prompts the thought that, away from the weariness of State ceremonial, it is not particularly irksome to be a Queen.

On this visit to Derby, where, on her way to Scotland, her Majesty alighted to place the foundation-stone of the new infirmary, the train was brought from Windsor by the three-cylinder compound passenger-engine "Jeanie Deans," and taken on to Normanton by the four-coupled express passenger-engine "Beatrice,"

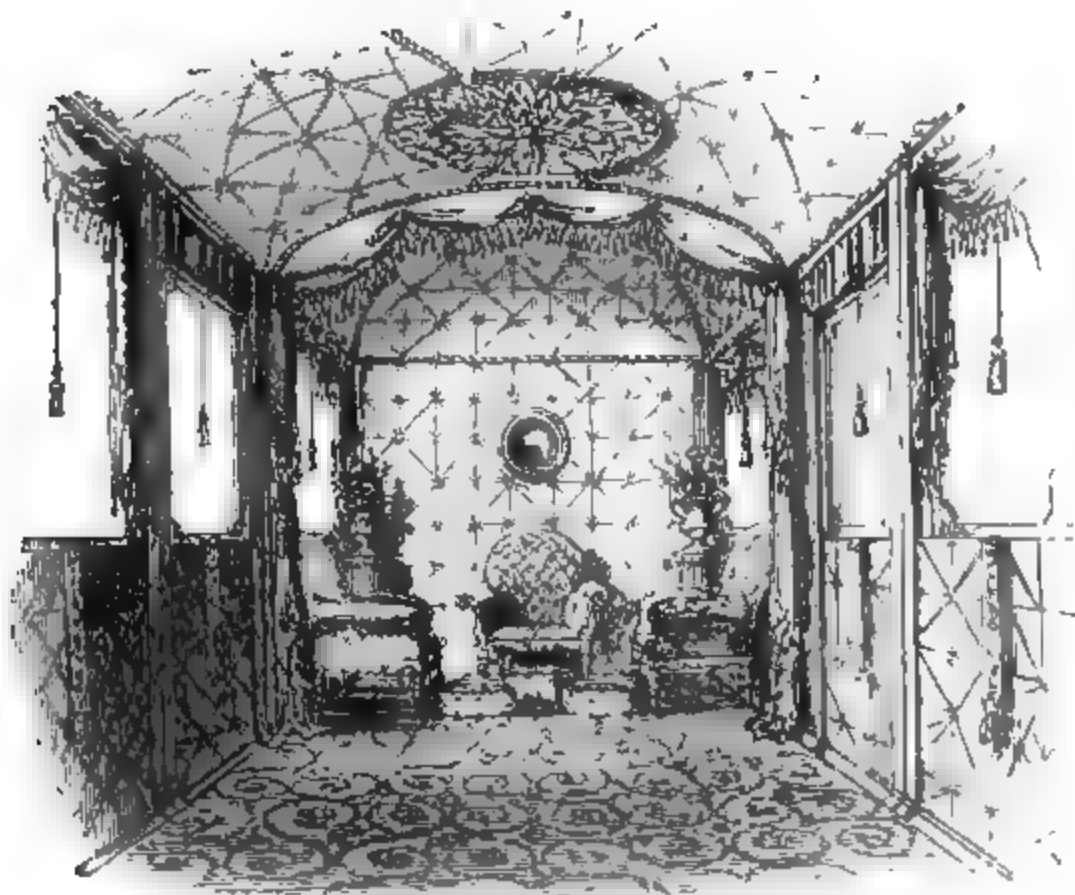
named after Princess Beatrice, who opened Saltaire Exhibition, at which it was shown, in 1886. Little heed is given to the train that has brought her when the Queen alights. The police push back the people,



INTERIOR OF THE QUEEN'S SALOON.

there is a flutter and rustle all down the platform, a shout, "She's coming!" the Mayor nervously adjusts his chain of office, and the band strikes up. Then the "Queen's Train" pants proudly in, and there is a rush of steam and an array of gliding carriages; but all the eagerness of the spectators is concentrated upon

the monarch of the realm, and they struggle to get a glimpse of her, to see how she looks, how she is dressed, how she steps on the carpeted way, and how she acknowledges the obeisance of his worship as he welcomes her to his municipality.



INTERIOR OF THE ROYAL CARRIAGE IN 1843—LONDON AND BIRMINGHAM RAILWAY.

The Queen, on December 27, 1864, becoming concerned with regard to the numerous railway accidents and loss of life, sent a letter to the directors of the various companies urging them to "carefully consider every means of guarding against these misfortunes, which are not at all the necessary accompaniments of railway travelling. It is not for her own safety that

the Queen has wished to provide in thus calling the attention of the company to the late disasters. Her Majesty is aware that when she travels extraordinary precautions are taken. But it is on account of her family, of those travelling upon her service, and of her people generally, that she expresses the hope that the same security may be ensured for all as is so carefully provided for herself. The Queen hopes it is unnecessary for her to recall to the recollection of the railway directors the heavy responsibility which they have assumed, since they have succeeded in securing the monopoly of the means of travelling of almost the entire population of the country."

Since then Her Majesty has in various ways shown how sincerely she desires the safety and welfare of her people. She has sent money, help, and sympathy to them in accident and misfortune; she has subscribed to many a fund to assist the widows and orphans of railway servants who have been killed upon the line; and when the disaster to the "Flying Scotsman" at Thirsk wrought death, and pain, and sorrow, and gave the railway passengers of England an uncomfortable shock, she sent, through Sir Henry Ponsonby to Mr. Mundella, the President of the Board of Trade, a message of tender sympathy, as she had often done before under similar circumstances.

If such care as is taken when the Queen travels were possible on behalf of "the meanest of her subjects," the deaths from railway accidents would arouse little comment, there would be so few to talk about; but the

price paid for this immunity from risk and danger would be the partial stagnation of the trade of the country, so elaborate and costly are the arrangements made to ensure the Queen's safety. There is not a loose rail, a weak point, a shaky bridge, a yawning signalman, down the line. Everybody—greaseman, wheel-tapper, stoker, driver, guard, porter, station-master, locomotive superintendent, general manager, and director—is on the alert. There is no Royal progress that is made with so much forethought as a Royal progress on an English line. There is no flourish about it—neither the display of flags nor the crash of music. All the fancy work comes afterwards at the station when the journey is done, and his worship the Mayor, in his official robes, bends low before the Queen, and the Town Clerk, looking severe or comical in his wig and gown, reads the address, that, judging from the cheering, really comes from the hearts of the people. But long before this loyal ceremony—which generally culminates in the knighthood of his worship—the word has been carried on the wings of the wind to every cabin on the track that the Queen is coming; and Dick Banks in the big box at the junction—who has brightened his levers until they gleam like silver, thinking perhaps her Majesty will catch sight of them as the train runs by—has a serious look on his face as he signals—two beats of the needle to the right—that the line is clear, and more responsibility on his mind than all the waiting crowd yonder.

“It is,” wrote Sir George Findlay, describing the

precautions for the Queen's journey on the London and North-Western, "only during the passage of the Royal train to convey her Majesty and suite to and from Scotland twice a year that the ordinary arrangements for working the line are suspended. The exceptional nature of the regulations then adopted may be considered as affording the nearest approach to perfection in railway travelling that has yet been arrived at. The train is lighted with gas, and fitted throughout with the Westinghouse and vacuum brakes, with an electrical communication between the front guard and driver. A pilot engine is run fifteen minutes in advance of the train throughout the entire journey, and in order to guard against any obstruction with the safe passage of the train, no engine except the pilot, or any train or vehicle, is allowed to proceed upon or cross the main line during an interval of at least thirty minutes before the time at which the Royal train is appointed to pass. All shunting operations on the adjoining lines are suspended during the same period, while after the Royal train has passed, no engine or train is permitted to leave a station or siding upon the same line for at least fifteen minutes.

"In addition to these regulations, no engines or trains, except passenger trains, are allowed to travel between any two stations on the opposite line of rails to that on which the Royal train is running from the time the pilot is due until the Royal train has passed. For instance, supposing the Royal train is to run on the down line from Stafford to Norton Bridge, and the pilot is due at Norton Bridge at, say eight o'clock, if the

goods train or light engine required to travel on the up line from Norton Bridge to Stafford, and it was ready to start at eight o'clock, it would be kept back until the Royal train had passed. The precaution is also taken of specially guarding every level crossing, farm crossing, and station to prevent trespassers, and of securely bolting all facing points over which the Royal train must pass; platelayers are also posted along the line to prevent the possibility of any obstruction or impediment occurring; and all level-crossing gates, where gatekeepers are not kept, are locked an hour before the train is due, and kept so until it has passed. Special arrangements are made for telegraphing the passage of the train from point to point as it speeds along its journey, and an instrument is conveyed by the train by means of which a telegraphic communication can be established at any place on the journey in case of need. The train is accompanied by a staff of fitters, lampmen, and greasers, who keep a vigilant watch on each side of it, so as to notice any irregularity in the running of the carriages, and who, upon the train stopping at the appointed stations, examine it throughout and grease the axle boxes."

With what solicitude and gratification the London and North-Western Railway Company have safely conveyed Queen Victoria on many a long journey may be ascertained from one of her Majesty's graceful acts:—

"Mr. G. P. Neele, the superintendent of the line, has been the recipient of a handsome memento from the Queen. Twice a year, with unfailing regularity, Her Majesty visits her

Royal palace at Balmoral; first, for a month from the middle of May to the corresponding day in June, and second, from the middle of August, remaining until nearly the end of November. The former journey is from Windsor, the latter from Gosport. In connection with these journeys on the English and Scotch lines, it is a never-failing practice for the head officers of the railway companies to accompany Her Majesty's train over the whole length of their respective lines, but with respect to the London and North-Western Railway, as that company not only supplies the saloons and vehicles composing the train, but also carries out the entire correspondence for organising the details of each of the journeys, it has been the custom for one of its chief officers to accompany the train throughout its whole course alike from Windsor or from Gosport to Ballater, the railway terminus for Balmoral, and *vice versa*. The general manager, Sir George Findlay, has occasionally undertaken this task; but the duty has more generally devolved on Mr. Neele, and in June last he completed his one hundredth journey in charge of the train on behalf of his company. Upon the fact becoming known to the Queen, she has, through General Sir Henry Ponsonby, presented him with an elegant massive chiming clock, bearing the following inscription on a tablet beneath the dial:—

“ ‘Presented by Queen Victoria, Empress of India, to Mr. George Potter Neele, in recognition of the care and attention he has given to her comfort and safety when travelling on the London and North-Western Railway for the last 31 years. 1892.’ ”

It is noteworthy that this gift was made in the year when Her Majesty was stricken with grief. She thought of others, and endeavoured to give them pleasure, in the midst of her own bereavement. Royal trains are not always associated with light-heartedness and luxury. Early in 1892 a great sorrow brooded over England. The heir-apparent, one remove, the Duke of Clarence, was lying dead, amid the nation's grief; and every subject could realise the Queen's pathetic words when she wrote: “The overwhelming

misfortune of my dearly-loved grandson being thus suddenly cut off in the flower of his age, full of promise for the future, amiable and gentle, and endearing himself to all, renders it hard for his sorely-stricken parents, his dear young bride, and his fond grandmother, to bow in submission to the inscrutable decree of Providence."

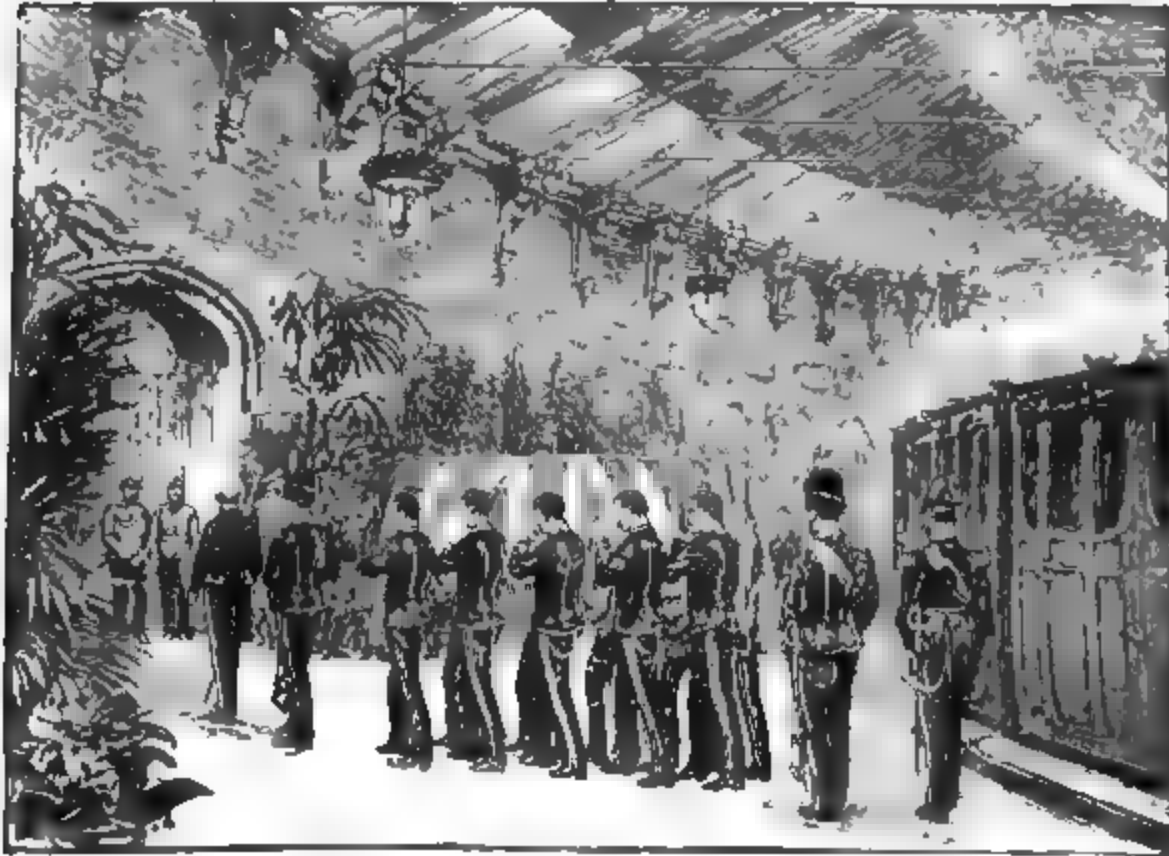
It was a memorable day in English history when he was borne lifeless from his Sandringham home to his burial, and there were sad hearts in the Royal train that carried all that was mortal of the young prince. The train, which consisted of eleven saloon carriages, conveyed the Prince of Wales, the Duke of Fife, and the Sandringham household. The coffin, which had been taken on a gun-carriage to the station, was reverently placed on the funeral car—a car draped with purple velvet and decorated with flowers—and the train departed on its touching journey. It went by stations wreathed with evergreens, and by coal-sheds whose sympathetic owners had lined their sign-boards with crape; now running on the North London and then on the London and South-Western Railway till it reached Windsor, where soldiers carried the duke's inanimate form across the platform to another gun-carriage, and then the solemn procession, in which were many princes, and some of his old comrades in arms, made its way slowly towards St. George's Chapel to his tomb.*

* The Duke of Clarence died at Sandringham on January 14, and was buried at Windsor on January 20, 1892. It is well that grief does not altogether cloud our lives. Princess May's deep sorrow has become a tender

Soon after the Duke of Clarence's death, her Majesty visited Hyères; and the *Illustrated London News*, describing "The Queen on Her Travels," said: "The two carriages provided for the Queen's railway travelling on the Continent are usually kept in the Gare du Nord at Brussels, under the care of a special workman, having been constructed and furnished in Belgium. Their external aspect is not very different from that of other saloon carriages. They are connected by a short corridor, forming a small suite of apartments. In front is a box for the Highland man-servant attending her Majesty. The drawing-room for the Queen and the Princess Beatrice is furnished with a sofa, two arm-chairs and footstools of Louis XVI. style, all covered with blue silk, with yellow fringes and tassels. The walls are hung with silk capitonnée, which is blue for the dado and pearl-grey above, brocaded with the shamrock, rose, and thistle in pale yellow. The curtains are blue and white. The small table is of a pale-coloured wood. A dark Indian carpet is spread on the floor. There are four lights in the ceiling, and in the centre is a ventilator of cut-out brass. The saloon leads to the dressing-room, which is hung in Japanese style, with bamboo round the floor. The Royal ladies' bedroom is decorated in grey and light-brown colours; the larger of the two beds is for the Queen, and the other for

memory. On the 6th of July, 1893, she was married in the Chapel Royal, amid much pomp and splendour, to the Duke of York; and the journey by special train from town to Sandringham, on the honeymoon, was made through congratulations and greetings that were evidently heralds of happiness.

Princess Beatrice or whoever travels with Her Majesty. Beyond the bedroom is a sort of luggage-room, where the maids sleep on sofas. Her Majesty, on the road, takes her meals in the saloon, which is lighted at night by four oil-lamps fixed in brackets on the walls, and



ARRIVAL OF THE FUNERAL TRAIN AT WINDSOR.

by one or two portable lamps. No electric lighting is adopted, but electric bells are fixed to call the servants. The bedding is the Queen's own, and she takes it away on leaving the train."

The precautions taken when a Czar travels are prompted by different motives from those that safeguard the Queen. There is another and more insidious peril than that of possible railway disaster. The feeling of

security that a free country gives is unknown in Russia ; and the heart and mind of its ruler are filled with a sense of insecurity and of brooding misgiving. The most extraordinary measures are adopted to secure his safety ; and on one occasion, when the late Czar was journeying between St. Petersburg and Moscow, this official solicitude for his welfare was carried to such an extreme that some of the passengers, unable to curb their impatience and conceal their chagrin, cursed the Imperial train and the Emperor too. Their ill temper was, to some extent pardonable. They were in an ordinary train, going from Moscow to St. Petersburg, and in the open country were shunted in a siding to let the Imperial train go by. The windows of the carriages in the ordinary train were closed, the doors locked, and sentinels placed at each door. The passengers were sternly told that they must not alight on any pretence ; and inasmuch as the line was guarded by soldiers, they thought it best not to disregard the command. The Czar went by ; but the ordinary train was delayed two hours before it was permitted to quit the siding.

The Emperor, the precautions for his safety being taken, braved the dangers of the line, and never thought of abandoning his journey. In that respect he was unlike Louis Philippe, who, in 1843, decided to go to Rouen by special train on his way to his château at Bizy, but gave up the idea and went by coach, his ministers having met and passed a resolution that railway travelling was not sufficiently safe for a king. There was some excuse for the resolution. The

railway disaster at Versailles on May 8 in the previous year was still in vivid memory. The accident was fearful and dramatic in its incident. A long train, drawn by two engines and crowded with passengers who had been at the king's fête, broke down soon after leaving Versailles. The first engine's axle gave way; the body of the locomotive fell on the line, the second locomotive crushed against it, and the three carriages following piled on the wreck. One of the engine-boilers exploded, blowing a fireman into the air. The carriages that had mounted the engines, and three other carriages on the line, took fire. The scene was appalling. The carriage doors were locked; and the few people who succeeded in escaping from the fiery prison fought desperately to the windows, and crushed through them scorched, blackened, half-mad, falling bruised, maimed, and in some cases delirious, upon the line. But many, overcome by smoke, or checked by flame, or exhausted with struggling, became a prey to the roaring fire, and at least fifty persons were burned to death.

The disaster impressed Sydney Smith, and prompted his remarkable letter, pregnant with satire, on railways. "Railroad travelling," he wrote "is a delightful improvement of human life. Man is become a bird; he can fly longer and quicker than a Solan goose. The mamma rushes sixty miles in two hours to the aching finger of her conjugating and declining grammar-school boy; the early Scotchman scratches himself in the morning in the early mists of the north and has his porridge in Piccadilly before the setting sun. . . .

Everything is near, everything is immediate—time, distance, delay, are abolished; But though charming and fascinating as all this is, we must not shut our eyes to the price we shall pay for it. There will be every three or four years some dreadful massacre—whole trains will be hurled down a precipice, and two or three hundred people will be killed on the spot. There will be every now and then a great combustion of human bodies, as there has been at Paris. . . . We have been, up to this point, very careless of our railway regulations. The first person of rank who is killed will put everything in order, and produce a code of most careful rules. I hope it will not be one of the bench of bishops; but should it be so destined, let the burnt bishop—the unwilling Latimer—remember that however painful gradual concoction by fire may be, his death will produce unspeakable benefit to the public. Even Sodor and Man will be better than nothing.”

CHAPTER VI.

THE LONDON AND NORTH-WESTERN—THE NAVY AND THE TELEGRAPH.

Quicker Mails—Thomas Brassey, the Railway Contractor—The Navy: his Nicknames, Attire, Work, and Love of Fight—A Revolting Crime—The Navy's Coolness in Danger—His Thrift!—The Beginning of the London and North-Western Railway—The First Train through Crewe—The Electric Telegraph; the News it Flashes—What the Telegraph Does for Railways—The Whispering Gallery of the Line—Broken-down Wires—A Railway Town—Washing at Wolverton—The Whims of a Ghost—Generous Shareholders.

THE Grand Junction Railway, which was one hundred miles in length, was opened in 1837, the year the Queen ascended the throne, and “by its aid the letter-bags sent from London at eight o'clock in the evening were delivered before noon the next day in Manchester, and the dinner-tables of the inhabitants of Birmingham were supplied with fish purchased the same morning in Liverpool.” Mackintosh secured the contract for this line, but ten miles of it was made by Thomas Brassey, and his work on the Penkridge Viaduct was the foundation of the career of the prince of contractors, who, during his active life, constructed more than 1,000 miles of railway, and practically brought the British navy into industrial prominence.

The navy, though hardly picturesque, with his great, ungainly form, and clay-tinted clothes, and

high-low boots tightly laced, and a bit of string tied round his leg below the knee, is a conspicuous figure



THOMAS BRASSEY.

in railway-making, and Thomas Brassey liked him, understood him, and knew how to use him. If he gave a gang the least hint to push on with the work the men would readily reply, "We'll run 'em in a *red 'un*," meaning that they would quickly send a large number of loaded waggons from the cutting to the tip; they did their fourteen sets—sent out

fourteen train-loads of earth per day—without a murmur, the lift averaging nearly twenty tons per man. In fact, when the contractor took his English navvies in 1841 to excavate for the Paris and Rouen Railway, the Frenchmen were surprised at these great fellows, toiling in the heat, with their shirts open, and their chests and arms gleaming with sweat, and exclaimed, "*Mon Dieu ! les Anglais, comme ils travaillent !*"

The language had to be grappled with as well as the earth, and the gangers especially found the labour difficult. The French navvies were chiefly instructed by signs, and Heeps in his book on Thomas Brassey's life, says: "The gangers pointed to the earth to be moved, or the waggon to be filled, said the word

‘d——’ emphatically, stamped their feet, and somehow or other their instructions, thus conveyed, were generally comprehended by the foreigner. . . . Among the navvies there grew up a language which could hardly be said to be either French or English, and which, in fact, must have resembled that strange compound-language, pigeon-English, which is spoken at Hong-Kong by the Chinese in their converse with British sailors and merchants.”

Like the nail-makers, the navy rejoices in a nickname. He is known as “Dry Dick,” “Uncle Ned,” “Tunnel Jack,” “Hedgehog,” “Polly,” “Old Black-bird,” “Foxey,” and in name has climbed even to the height of “The Duke of Wellington.” “Dry Dick,” to the navy, is a name indicative of thirst; and it is recorded of one of these railway toilers with pick and shovel that he began drinking on Saturday, and drank all his wages, a Whitney pea-jacket with mother-o’-pearl buttons, six flannel shirts, two white linen ditto, sundry pairs of stockings, a pair of boots, and a silver watch with a gilt chain! “Devilshoof” would not cause more dismay at table d’hôte than an English navy with his magnificent appetite and unquenchable thirst.

The navy, English or Irish, is rough in manner, and when roused is fond of a fight, sometimes forgets his vows of good comradeship, and becomes persistently belligerent, dealing his blows as lustily, though, perhaps, not so gracefully, as a knight was wont to do in tournament. On October 14, 1839, for instance, the

fighting between the English and Irish navvies working on the Chester and Birkenhead Railway was so fierce that the military had to interfere and drive away the furious gangs.

But the navvy does not often descend to murder, and there are few crimes on record against him like that committed on December 17, 1840, when John Green, a ganger on the Edinburgh and Glasgow Railway, was murdered by two Irishmen at Crosshill. A feud arose between the English and Irish navvies on the line, and it led to this tragedy, which was somewhat peculiar in its character, one Irishman beating Green on the head with an iron poker while the other jumped on his body. The scaffold was erected in a field near the bridge on which the crime was committed, and the murderers—Doolan and Redding—mounted the ladder to their doom in the presence of one hundred thousand people. So apprehensive were the authorities that the Irish labourers would attempt a rescue, that not only military but three pieces of artillery were placed on the ground.

There is a praiseworthy as well as a revolting phase of the navvy's character. He is, as a rule, generous; he seldom shirks his duty; and he is brave. Two navvies were buried alive in the first tunnel made on the Rouen line, and a shaft fifty feet deep had to be dug to reach them. The men—one a Frenchman and the other an Englishman—were rescued after eleven hours' work. The Frenchman, on reaching the shaft-bank, hugged and kissed his friends, and in a paroxysm of excitement laughed and wept. The Englishman sat

on a log, wiped the sweat off his face with his cap, looked coolly down the shaft from which he had been rescued, and said, "You've been an infernal short time about it!"

An evidence of even greater coolness was given



NAVVIES AT WORK.

during the making of the Midland line between Amburgate and Manchester. The end of a tunnel fell in, imprisoning many navvies, and so great was the mass of earth and rock that blocked the tunnel mouth, that the men were not reached until the lapse of twenty-three hours. The navvies were almost at the last gasp through lack of air, but they were alive and got safely out, when the rescuers ascertained that the men had actually continued their work after the tunnel end had

fallen in, one of their mates encouraging them to do so saying, "Well, chaps, we shall never get out alive, so we may as well go on with our bit while we can!"

But the navvy's most indulgent friend would not hazard the contention that he is thrifty. I have seen the navvy tramping to a new job, I have seen him working, and I have seen him at his leisure. There is an easy freedom in all his ways, and his money, got with effort and sweat, is flung out of his pocket with as little thought as if he were simply tilting and flinging the soil from his barrow. I have seen him give a very fancy price for a big, gaudy neckerchief because he liked the pattern; I have seen him smash a mate in what he calls fair fight and then pay for the sticking-plaster at the nearest druggist's; and I have seen him at his Saturday-night revels, when his thirst has been insatiable and his generosity in paying for drink embarrassing to a person of limited swallowing capacity; but I have seldom seen him thrifty. Thrift is impossible without self-denial, and the navvy, as a rule, is too fond of the good things of this life to practise it.

Nevertheless, there must be a new race of navvies springing up, for Sir James Fergusson, in his report on the work of the Post Office in 1891, made the gratifying statement that some of these men had been persuaded to invest a portion of their wages.

Nine years after the navvies had finished their work on the Grand Junction Railway, in 1846, that line and the Manchester and Birmingham and the London and Birmingham were amalgamated under the title of the

London and North-Western Railway ; and a year afterwards Sir Richard Moon, who has recently relinquished his position as a railway administrator, joined the board of directors as plain Mr. Moon. At that time it was possible, without the delay of a night in Birmingham, to get through from London to Liverpool in $14\frac{3}{4}$ hours. The company had still amid its rolling-stock many open carriages ; but lest passengers should object to rub shoulders with handcuffed prisoners, who are now hustled into any third-class compartment on their way to gaol, they provided a special "convict carriage truck."

The engines were constructed and repaired at Wolverton and at Crewe. The latter place, now a great centre of industrial railway life, with its large shops in which locomotives are built, and waggons made, and steel rails produced, was then an insignificant village.

A hamlet known as Crewe,
Consisting of a house or two,
Or better termed a shanty.

The first train ran through Crewe on July 4, 1837, and was guided by James Middleton, who, four years later, gained some local fame by getting upon his engine and driving it from Birmingham to Liverpool to carry to the city on the Mersey the news of the birth of the Prince of Wales. The sixpenny telegram is such a common and familiar means of communication that one scarcely considers the electric telegraph a modern discovery ; yet it

was a novelty and a great luxury at the time of the Prince's birth. It was not until 1837, on the day after the first train passed through Crewe, that experiment with it was made on the London and North-Western Railway, the company having sanctioned the laying-down of wires between Euston and Camden Town.

Now the electric telegraph has become a necessity to our political, commercial, and social life. It tells England, by means of submarine cable and code, of ministerial crises abroad, and how the pulse of commerce beats; and along a thousand home wires, by day and night, it flashes myriads of words that speak of work achieved or in prospect, of trade enterprise, of buying and selling, of joyous pastime or grim endeavour, of disaster or noble exploit, of the million incidents that make up our national life.

At midnight, perhaps, when you are getting your health sleep, the wires may be the busiest. Lord Salisbury may have been trying to soothe the mercurial politicians of Birmingham, or Lord Rosebery may have been speaking on the Liberal programme in Edinburgh. The loud and continued cheering, amid which this or that statesman resumed his seat, died away perhaps nearly two hours ago. The reporters, who have had a hard night's work with phonography and stylus and carbon paper, sent in their copy for transmission just as the meeting broke up, and are supping or chatting about some oddity of phrase, or some ludicrous platform incident, about one party leader's

caustic criticism, or the other's pawky humour and his race-horses. But there is no time to sup or chat in the telegraph office. There, in the shadowed light, with their tables laden with flimsy copy of the statesman's speech, the clerks are sending thousands of words to the daily newspaper offices in London and in



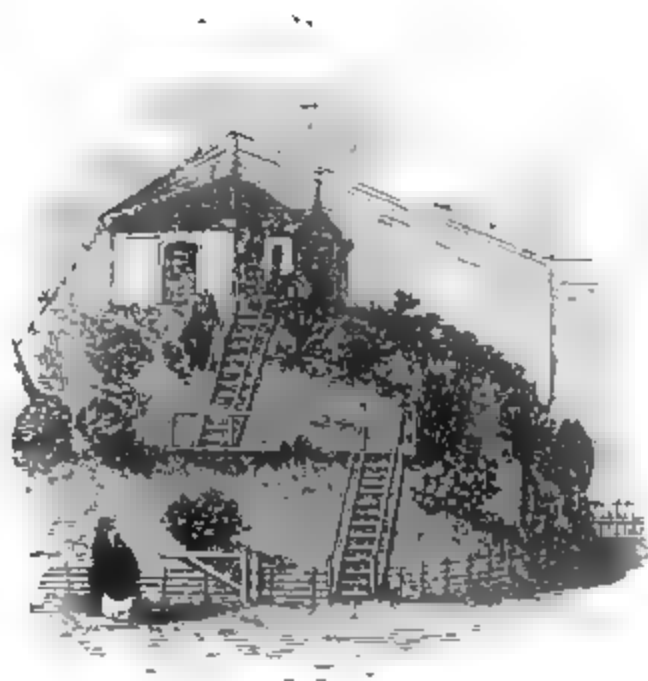
TELEGRAPH CLERKS AT WORK.

other cities. Their fingers remind one of inexhaustible grasshoppers, incessantly jumping up and down, as they tick, tick, tick the columns of eloquence on to the wires, giving their brother clerks at the other end a sharp time of it in transcription, and flooding the sub-editors' rooms with heaps of copy that has to be rushed up to the printers in time for the first edition, which

must be swiftly despatched to catch the special newspaper train.

The telegraph has not only revolutionised the English newspaper, but it has been, and is now, a great help, or, in peculiar circumstances, an embarrassing hindrance to the railway passenger. Its winged words tell your friend to meet you at some station two hundred miles north, or inform your agent in town that you will be at Euston, or King's Cross, or St. Pancras in time for luncheon and talk on some big contract. The message just sent in cipher to the bank manager in the country is to apprise him that a large amount of bullion, in charge of two trusty clerks armed with revolvers, is coming by train; and the cramped writing on the telegraph form that nearly touches corners with it on the smooth counter, is the caligraphy of Detective Fudgit, who is going down the line too, and has wired Mark Flint, the railway detective, to saunter to the station and watch the arrival of the mail, for Jim Moody's gang have tired of coining and intend to make a rush for real gold, so there may be "a bit of stiff work." The telegraph is a friend to all honest people travelling by rail, and now and then it assists the swindler and the rogue in his schemes. Nevertheless it is generally on the side of right and justice, and it has checked many a forger in his flight from his dupes and the Assize Court, and more than one murderer trying to travel beyond the memory of his victim and the uncomfortable sensation that is inseparable from the hangman's touch.

In the management of the railway itself the telegraph has become indispensable. There is a continual ticking in nearly every instrument-room down the line, and the wires are always busy, except they lie useless, broken by gale or snowstorm. In 1884 the messages sent on the Midland Railway alone reached the number of 5,000,000 for the year; and Mr. W. Langdon, the chief of the Telegraph Department at Derby, says that in 1892 the number of messages dealt with was not less than 11,924,707, the instruments used being the Sounder, the single needle, and Bright's bell.



THE FIRST TELEGRAPH STATION
AT SLOUGH.

Mr. John Ellis, commenting in the House of Commons in 1893 on the privilege granted to railway companies of sending certain telegrams free, elicited from Mr. Arnold Morley, the Postmaster-General, some interesting information. "Statistics of the number of telegrams sent free of charge for the railway companies in 1871," said the right hon. gentleman, "can only be given as regards the companies of England and Wales. In the case of these companies the number sent in 1871 was 87,201; in 1892 it

had risen to 1,329,531, an increase of more than fifteen-fold. During the same period telegrams of all other descriptions rose from 9,573,548 to 57,871,429—an increase of about sixfold. Negotiations have resulted in the commutation of the privilege into a right to send a fixed number of messages and words per annum in the case of the Midland and the Manchester, Sheffield and Lincolnshire Companies. Negotiations with other companies are in progress, and it is hoped that all the companies will recognise that it is desirable, in their own as well as in the public interest, to accept the principle of commutation."

The telegraph, though it occasionally blunders, is the swiftest and most zealous of all railway servants. It gives a word of warning to the signalman, a hint of danger to the driver, a peremptory instruction to the station-master in emergency; it speaks even to the shunter amid the maze of waggons, and to the plate-layer busy with his gang on the creosoted sleepers and the rusty rails in the lonely cutting. It marshals goods trains, stops expresses, orders special trains, helps every official on the line; and is helped in its turn by the telephone, which in many a crowded dépôt forwards and supplements the telegraph message.

The railway is an interminable whispering gallery. Along its wires, on which the wind makes strange music, flash a thousand instructions relating to the working of the line, and sometimes a purely personal message is slipped in—a robust curse to an ill-tempered clerk at the next station, a phrase of endearment to a female

operator miles away, or a staggering answer to an innocent question such as that put by the signalman, who, hearing his bell whirring, asked, "What is it?" the reply coming in desperate spasmodic rings: "It's twins!" Some idea of the enormous system of railway telegraphy may be obtained from the extent of the wires on the London and North-Western alone. Sir George Findlay wrote: "The mileage of telegraph wires on the line for purely railway purposes is 11,947 miles, in addition to which there are 6,962 miles appropriated to the use of the Post Office, making up an aggregate of 18,909 miles of wire, while the number of battery-cells in work for carrying on the telegraphic business of the company amounts to 116,430."

Telegraph wires, like men and women, are the sport of atmospheric influences. In some climates they retain their strength and live long; in others they become weak and collapse. They have a brief though not a merry career in the chemical-charged air in Widnes, corroding there in three years; but in Anglesey, unless they are brought down by storm that blows fiercely from the north-west, they last through decade after decade, and there are wires in use in the island that were fixed nearly forty years ago.

The telegraph is invaluable in case of railway mishap and disaster; but it is sometimes utterly helpless in storm. Even at the moment when its help is most needed the driver of the rescue train, slowly and cautiously making his way through deep drifts to

the snowed-up express, has to run the gauntlet of fallen telegraph poles and signal posts, and to exercise his ingenuity to escape the tangle of wires.

When the railway from Crewe to Chester was shaping, the remark was made that "it began in a field and ended in the old rotten city of Chester." Crewe is no longer a field merely. It has altered considerably since the locomotive first puffed by its quiet ways. Wolverton, though the locomotive works of the company were removed from it to Crewe in 1877, has steadily increased. It devotes itself to railway carriage building; and always presents a busy picture, with its huge timber-yard of English and foreign wood, from oak to mahogany, and ash to teak, with its great saw-mill, and numerous shops in which everything essential to the make and upholstering of a carriage is turned out by the brains and hands of two thousand workmen. But Wolverton has not extended so rapidly as Crewe, which carries on its industry on a more gigantic scale, and sends out from its shops many notable examples of mechanical and engineering skill.

Crewe, the railway settlement, is practically the centre of the London and North-Western system. It found room for the old engine-building plant of the Grand Junction Railway, removed from Edgehill, and also for the heavy mechanical appliances brought from Wolverton. It erected workshops, and built houses, and made street after street, until the formerly obscure place with only thirty dwellers has become an important town, with 29,000 inhabitants. The works,

which in 1843 covered $2\frac{1}{2}$ acres of ground, in 1886 covered more than 140 acres, of which over 40 acres are roofed in; and where 161 hands were employed at the earlier date, over 6,000 were at work at the later period. There are at the present time 6,500 men at work in the shops; and adding to these the 720 engine-drivers, stokers, and cleaners on duty at the steam sheds, the total number engaged at and in connection with the locomotive works is 7,220. More than 3,000 engines have been constructed at Crewe; and in the repairing-shops alone a mass of work is done, for here 2,000 locomotives are overhauled and made fit for travel again every year.

One of the novelties at the carriage-building works at Wolverton is the laundry, in which nearly 5,000 towels and sheets, used in the saloon carriages, are carefully washed and aired every week; and perhaps one of the most interesting incidents in railway life at Crewe is to ride, without payment of fare, on the narrow-gauge track which runs for five miles about the works. Probably you will only have a waggon to travel in along the eighteen-inch line, and the stumpy-engine "Dickie" to pull you; but the journey, if made with a train of heavily-laden trollies, is likely to prove attractive, for you pass through many a strange scene of vigorous industry, and also create some sensation yourself, inasmuch as "Dickie," easily reversed by a pair of spur wheels, indulges now and then in imperious antics, and is occasionally as erratic as his queer namesake in the Peak.

There has been some strange opposition to railway making; but none more peculiar than that of the ghostly objection to the construction of the London and North-Western line to Buxton. The engineers met with very considerable difficulty in one part of the railway, chiefly owing to the repeated yielding of the foundations of a bridge; and according to the superstition of the locality, the skull "Dickie," who had long kept grim vigil in the window of a farmhouse at Tunstead, exerted his sinister influence to retard the work. The skull, it is said, has received a murderer's blow; but although it is in three parts, it has still capacity for good and evil, and has often been gazed upon with awe, reverence, and credulity. To move it means disaster: to speak slightly of its power means misfortune. There are people who, even in this wise nineteenth century, still appear to believe that an astral form hovers about these old bones, ready to do their bidding. Samuel Laycock, the Lancashire poet, evidently thought the skull amenable to rhyming appeal and expostulation, especially if couched in the dialect to which it was accustomed, for he wrote—

Neaw, Dickie, be quiet wi' thee, lad,
An' let navvies and railways a be;
Mon, tha shouldn't do soa—its to' bad,
What harm are they doin' to thee?
Deod folk shouldn't meddle at o',
But leov o' these matters to th' wick;
They'll see they're done gradely, aw know—
Dos't yer hear what aw say to thee, Dick?

Neaw dunna go spoil 'em i' th' dark
What'e cost so mich labber and thout;
Iv tha'll let 'em go on wi' their wark,
Tha shall ride deawn to Buxton for nowt;
An' be a "director," too, mon;
Get thi beef and thi bottles o' wine,
An' mak' as much brass as tha con
Eawt o' th' London an' North-Western line.

The skull, and the spectre at its command, probably flattered by the brilliant prospect the position of director opened up, ceased to do evil on the line, and the railway from Whaley Bridge to Buxton was completed.

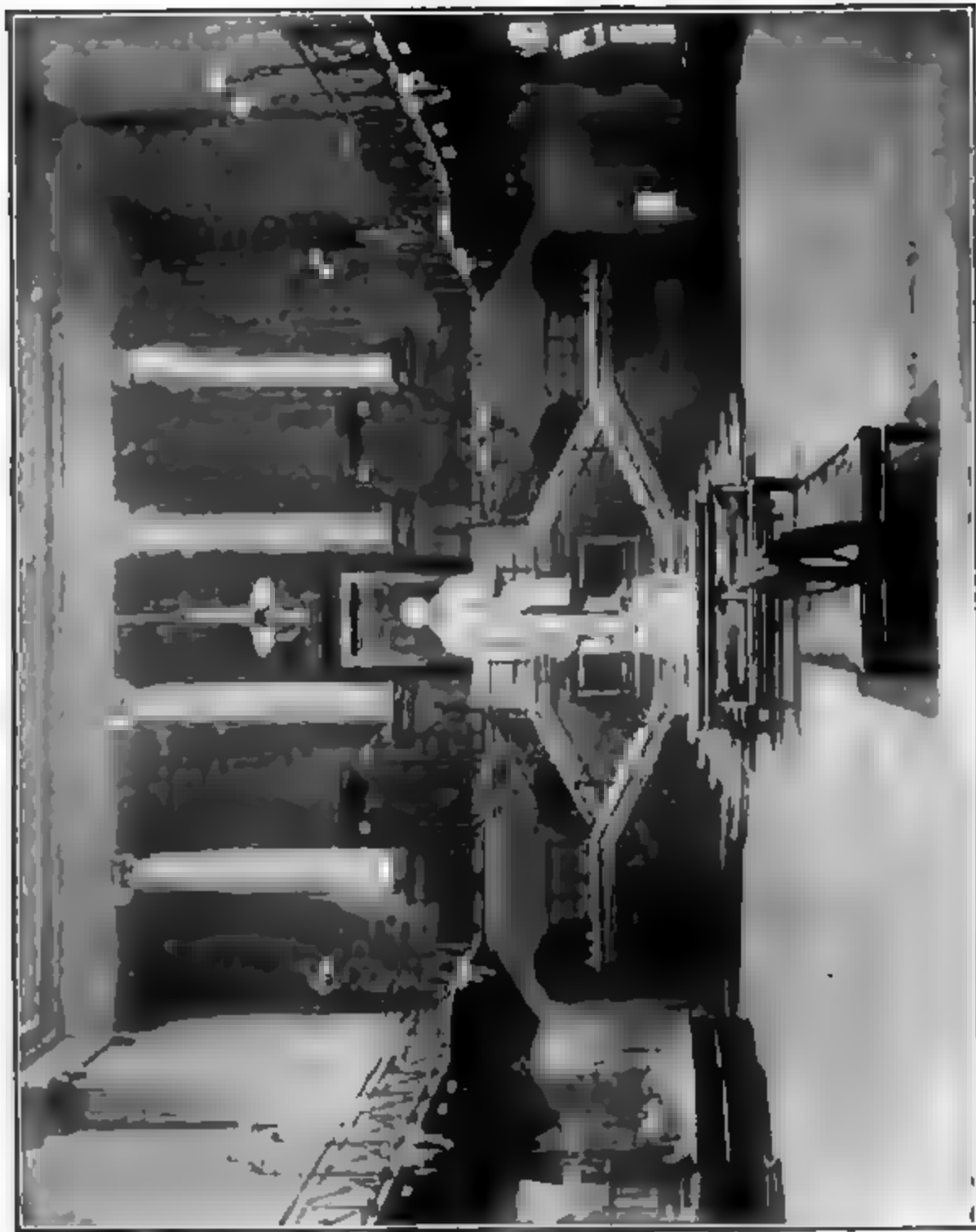
The railway shareholder is usually considered a modern Shylock, inclined even if he gets his "pound of flesh" in the shape of a substantial dividend, to grumble because it is not a pound and a-half; but the generous side of him is certainly seen at Crewe. The company have erected nearly 1,000 houses for their workpeople, they have presented the town with a public park, they have endowed a church, put up a mechanics' institute, established a library, and given shrewd encouragement to education and thrift.

CHAPTER VII.

THE DEVELOPMENT OF A GREAT RAILWAY.

The London and North-Western—Working Trains by a Rope at Euston—A “Fine Doric Portico”—An Ancient Roadway—The Line Twenty Years Ago—A Nice Income—The Modern Love of Change and Recreation—Old-Fashioned Notions of Business and Leisure—Privileges to Work-people—Cheap Travel—Playing a Waiting Game—Plain Mr. Moon; His Characteristics and Policy—“Lord! there’s our Sam”—A Clerk’s “Heinous Crime”—Reproving a Director—How a Railway is Managed—The Handling of Goods Traffic—Sending Cotton to China—Bringing Wool to Yorkshire—Loading and Unloading at a Noted London Depot—A Silent Figure in a Busy Scene—An Irish Giant—The Traffic at Holyhead—London’s Appetite.

THE rapid growth of Crewe is indicative of the development of the London and North-Western system. Striking away from Euston, that system touches Oxford on the west, Cambridge on the east, serves Northampton, Rugby, Birmingham, Stafford, Crewe, Chester, and Holyhead, sends its tendrils through some of the most delightful scenery in North Wales, to Rhyl, Llandudno, Festiniog, and Barmouth, branches to Shrewsbury and Aberystwith, goes further south to Cardiff, Swansea, and Pembroke; continues its main road from Crewe to Manchester, Preston, Lancaster, Penrith and Carlisle, and before stretching itself so far north in this direction, runs into Liverpool on the one hand, and across Yorkshire to Huddersfield, Leeds, York, and Hull on the other. It traverses three hundred miles of



EUSTON STATION: THE ENTRANCE HALL, SHOWING GEORGE STEPHENSON'S STATUE.



country in its curving main length from south to north ; and it runs some notable expresses, which not only speed over the track from London to Birmingham in $2\frac{1}{2}$ hours, to Manchester in $4\frac{1}{4}$ hours, to Edinburgh in $8\frac{1}{2}$ hours, to Glasgow in $8\frac{3}{4}$ hours, and to Aberdeen in $12\frac{1}{4}$ hours, but work in connection with the sea-traffic to Kingstown and Dublin North Wall, running the Royal Irish Mail and the Irish Express.

When the London and Birmingham Railway was opened in 1838 the trains were worked between Camden Town and Euston Square by a stationary engine, and a rope one hundred thousand feet in length and nearly three inches in thickness. The rope would have been kept on the strain if it had been still in use at Euston on the London and North-Western during the Christmas of 1891, when in four days of dense fog no fewer than six hundred trains passed in and out of the station, carrying 15,000 passengers and 40,000 parcels. Though the mode on this line fifty years ago might be somewhat primitive, the proprietors were very proud both of their station and of their traffic.

“The fine Doric portico in Euston Square,” says a writer of the time, “reminds us of the propylæ of the Greek cities, with centre and two lodges on each side. The centre offices are upon an admirable plan for convenience and respective communication ; and we find all the arrangements simple, comprehensive, and exact. With regard to the station of the carriages, and the passing of the trains, the simple regulation of adhering to the old practice of keeping the left side

has wonderful effect in facilitating the general business, while it obviates all danger of accident or collision by the trains.”*

Fine language, in fact, seems to have been popular in those days, for at the opening of the Trent Valley line in 1847, Sir Robert Peel, then in opposition, took



PORTICO OF EUSTON STATION.

a prominent part in the ceremony, and mingled fancy with history, comparing the new railway to “the opening-out, nearly two thousand years previously, of the great north-western communication from London to Chester under the superintendence of Julius Agricola,

* “The Midland Counties’ Railway Companion,” published in 1840. The little book contains many prim engravings and an introduction, in which the writer says he will make earnest endeavour “to be a faithful historian of every object of interest which attracts the attention of the traveller, thereby awaking recollections of past occurrences, and affording a pleasing comparison between them and the present condition of the country, in what is justly termed the Age of Improvement.”

who united in himself the capacities of engineer and contractor !”

In 1874 the London and North-Western Railway Company congratulated themselves on the fact that they had 1,200 miles of line worked on the block system ; and the chairman, at the February meeting, said they were running no fewer than 700,000 passenger trains with comparatively few accidents. Indeed, he borrowed the old story as to the security of the passenger's life on the railway, and said that people using the London and North-Western system travelled with greater safety than they did in their own carriages through the streets, and that they were in less peril than pedestrians in a crowded city.

In 1890 the company's trains traversed a distance of 41,899,410 miles, carrying 62,947,729 passengers, and 37,358,724 tons of minerals and merchandise. In 1893 the mileage was 41,132,000, the revenue £11,235,860, and the capital had reached the enormous sum of £121,942,553. These are figures that only a man with a Chancellor-of-the-Exchequer-like instinct can grapple with ; but roughly speaking it may be said that the annual income of the London and North-Western is nearly as great as the entire fortune amassed by Cornelius Vanderbilt, the American Railroad King, who died on January 2, 1877, worth property variously valued at from twelve to sixteen millions sterling.

One of the most remarkable features in the company's business is the revolution that is going on with regard to the passenger traffic. Lord Stalbridge,

speaking at the August meeting in 1891, pointed out that during the half-year there had been a decrease of 16,987 in the first-class passengers, and of 43,733 in the second-class, but an increase of 581,203 in the third-class passengers. In 1893 the revenue from third-class passengers was £2,813,434, against £2,791,858 in 1892; from second-class, £257,782, against £306,863; and from first-class, £498,469, against £508,856. These figures show under another aspect the growth of the third-class, and the decadence of the first- and second-class traffic.

How the desire for recreation, the temporary break-away, the complete but transient freedom from toil, is spreading! A quarter of a century ago the excursion-train was frowned at. Our parents did not believe in "gadding about" the country. A long journey was a serious matter; invariably for business, seldom for pleasure. A week-end jaunt to the seaside, or to the Shakespeare country, or to the Lakes, to the home of Wordsworth the poet, who hated railways, would have excited ridicule. There were no rollicking going-away clubs in Lancashire; no cheap fares for anglers who wished to run down to the still waters of Lincolnshire and spin for pike or cast bait for bream; no saloon carriages at low rates for gaily-dressed lawn-tennis parties going down to the Scarborough' tournament; no trains full of hurly-burly football players, aggressive, loud-voiced, muscular, and brimful of health and vigour, boisterously travelling to Glasgow, or to Manchester, Birmingham, and London, to show how lustily they

could kick, push, and struggle in the Association or the Rugby game.

Places of business were opened earlier and shut later. The Wednesday-afternoon holiday, the Saturday half-day, and the talk about eight-hour work, were in embryo. Tradespeople, especially in the small towns, were severe, methodical, given to dignified gossip and high neck-cloths, and slow but sure in their transactions. Many of them lived behind or above their shops; and it was no unusual practice for a tradesman in the Midlands to tramp all the way over the moorland to Manchester to buy prints, and on returning, tired out, to sleep on a camp-bed under his own counter. Business was not so feverish, so full of fierce competition as it is now. "The customers," as the author has written elsewhere, "came leisurely, and were served leisurely, and went home leisurely, after a pleasant chat with the greengrocer and the butcher. The provision-shops were not crammed with tinned rabbit, and potted lobster, and preserved peaches, and Normandy butter, and foreign bacon. Their proprietors were content to sell home-made bread, and home-fed bacon, and English flour, and the windows were set out with baskets of fresh butter and newly-laid eggs brought from prosperous homesteads. One gas-jet generally sufficed to light up the window, across which ran a solitary shelf bearing some half-dozen glass jars, one containing 'candied peel,' and the others brightly-coloured sweetmeats, that made the mouths of passing urchins water. A Derbyshire, Cheshire, or Gloucester

cheese, 'on the cut,' stood at the end of the counter near the old-fashioned scales and opposite the fat bin, where the flour was heaped above the open lid in white peaks as if trying to touch the choice hams that hung from the ceiling. Simple, but useful, shops were these, and they mostly did a profitable business, without enticing purchasers with seductive presents of tea-pots, Japanese fans, and cheap curiosities."

But however leisurely business was transacted in large cities and in small towns, it was not an age of concession, and railway companies never thought of giving such a privilege to their workpeople as the London and North-Western have granted. In some things the company are inclined to be autocratic, but the men certainly value this concession. During the first week-end of September, 1891, the works at Crewe were closed for a working day and a-half. No fewer than 3,000 tickets were issued to workmen and their families for Blackpool, 400 to London, and 106 to Edinburgh. In addition to these tickets for journeys by the ordinary workmen's excursions, 7,000 quarter-fare or eighth-fare tickets were issued for the week-end to the railway workers and their families to various places on the London and North-Western system. The company may lose in one way, but must gain in another, from fostering the natural desire to travel. The break upon the round of home life, happy though that life may be, cannot do otherwise than benefit the wives and children. The change from the toil of the fitter's shop, and the clang of the foundry, and the heat

and sweat of the rail-mill, must give new elasticity and renewed vigour to the handicraftsmen in iron and steel, and prompt them to more willing and better work.

Recognising the need of cheap travel for those they employ, the company might carry the principle further, and apply it more freely to the class of passengers from whom they obtain a great part of their revenue. They might, with advantage, not only abolish the second-class passenger throughout their system, but cheapen the rate per mile to those who "travel third-class because there is not a fourth." The London and North-Western are not likely, however, to venture on this experiment in the character of pioneers. They have invariably permitted other companies to take the first step along the path of reform, though they soon put on a spurt to catch up their rival if they see policy or profit on the new road. In the railway race to the North in 1888, for instance, the Great Northern forced the running, but the London and North-Western express from Euston to Edinburgh, by the West Coast route, did not crawl. The speed of the train seemed to be simply a question of instruction. The company forgot the resolution they passed in 1838, that it was their "chief aim in the regulation of trains to ensure a uniform precision of movement on the railway;" and just to show the Great Northern that they could be quick if they desired, they one day sent the express from Euston into the station at Edinburgh *twenty-two minutes early!*

The company have become so powerful that they

can do pretty much as they please. No other English railway company have such a large and productive capital or a more secure position. The London and North-Western have developed into an enormous undertaking, and their prosperous growth has been to a great extent guided and fostered by the shrewd, tireless brain of Sir Richard Moon, who became chairman in 1862. He stamped the concern with his own individuality. He was imperious, a strict disciplinarian, severely just, an indefatigable worker, and sometimes broke through his stern mask to do a kindly deed. But the London and North-Western was his kingdom, and he ruled it with a firm hand.

“His life,” as *The Times* remarked on his retirement, “was devoted to the interests of the company. When he was not on Euston in consultation with his permanent officers he was more often than not somewhere down the line watching how things were going on. Only a few months back, old man as he is, he was seen climbing up ladders on the new Stockport viaduct, to watch the progress of the works. If there was anything that escaped his lynx-eyed attention, his officers at least never found it out. ‘How is it you are paying so high a price for gas-piping?’ he once asked an astonished district engineer. On his frequent visits of inspection to different parts of the system, it was no unusual thing for him to be hard at work with the officials over plans and estimates till after midnight, and then up to breakfast at seven next morning, and off to consider

the question on the ground. Needless to say, he met with not a few adventures on his travels. Lancashire some years back delighted itself with a tale, how Mr. Moon, passing through a station designated in 'Bradshaw' as 'Tyldesley Banks,' was shocked to hear a porter calling out 'Tidsley Bunks,' in the broadest vernacular. Summoning the man to the door of the carriage, he promptly gave him a lesson in pronunciation, and, on his return in the evening, was gratified to find his pupil pronouncing Tyldesley Banks, if with some hesitation, still with the utmost correctness. Just, however, as the train was starting from the station, a voice exclaimed, 'Lord, there's our Sam!' and promptly a bevy of pitmen, in whose ears the unfamiliar sound had struck no answering note, tumbled pell-mell out of an adjacent third-class carriage."



SIR RICHARD MOON.

"'Never let me see that man's face again!' was reported to have been Mr. Moon's sentence, on one occasion, on a rising junior occupying a confidential position, who had been guilty of what many people might have thought a very venial offence. Only a short time back a clerk was rumoured to have disappeared from Euston because he had committed the heinous crime of going to his work on a Saturday

morning in July in flannel trousers. An early riser himself, Mr. Moon expected his staff to follow his example. Even heads of departments, it is said, entering their offices at five or ten minutes past nine, have before now 'found the chairman installed in their seat, and been greeted with the words: 'Good morning, sir. The North-Western hours are from nine till five.' Mr. Moon was no respecter of persons. The same punctuality and the same undivided attention which he demanded from the last-joined clerk he insisted on also in the members of his Board. A newly-appointed director, invited to come and see the chairman in his private room an hour before the business of the Board commenced, arrived ten minutes after time, and began with the words, 'I am afraid I am a few minutes late.' 'It's a very bad habit,' was all the response the chairman vouchsafed. Another day a director brought a newspaper into the Board-room, and kept it in front of him on the table after the business had begun. 'It is not the custom at Euston to read newspapers at the Board meetings,' said Mr. Moon severely. 'John,' turning round to a servant, 'take away Mr. ——'s newspaper.'

"Rigid disciplinarian though he might be, Mr. Moon has never wished to be other than a generous employer, and few companies employing such a large number of servants can boast to have seen as little of labour troubles as the North-Western."

The command and control of a railway company like the London and North-Western is not unlike the command and control of an army. The

chairman of the company is the commander-in-chief, the thirty directors his staff, the general manager the general of the forces, and the heads of the various departments the colonels, majors, captains, and lieutenants of the line. The general manager is really responsible to the directors for the executive management of the railway. After him in rank come the chief goods manager and superintendent of the line. For easier working the system is divided into ten districts, controlled by district inspectors, who become, through the information given by their travelling inspectors, epitomes of the condition and working of the railway; and in six districts there are also district goods managers, who carefully watch the drift of traffic. "The claim of responsibility and of supervision is a very complete one; and, in fact, the secret of organising the management of a great service, such as this, is nothing more than a carefully-arranged system of devolution combined with watchful supervision. It is not, of course, practicable for the general manager to superintend in person the every-day actions of the porter or the signalman, but these latter act under the immediate direction of the station-master, the station-master is accountable to the district superintendent, the district superintendent to the superintendent of the line, the superintendent of the line to the general manager, and the general manager to the chairman and directors." *

* "The Working and Management of an English Railway," by George Findlay.

The familiar saying that "Trade follows the flag," has a sequel in the fact that "the passenger follows the trade." Although we are becoming a more pleasure-seeking and recreation-loving nation, the great bulk of the people have their noses still to the industrial and commercial grindstone, and there is more travelling for toil and business than "for the fun of the thing." So long as we stick, in the main, to honest, earnest work, we shall not take much harm, and one has only to get mixed up in the bustle and bump of goods traffic at the London, Manchester, and Liverpool depôts to discover that the country is still steadily applying the bulk of its productive power; that notwithstanding labour dispute, short-time movement, and miners' holiday, somebody is keeping at work and turning out an enormous quantity of merchandise. Almost any night the scene in Portland Street, Manchester, is eloquently indicative of the old saw that we are "a nation of shopkeepers." The street is crowded with drays and carts, with almost every variety of vehicle, all piled high with Manchester goods, waiting at the warehouse doors for the last order, or moving stationward; and, as a merchant remarked not long ago, the trade thoroughfare is in such a maze and struggle of traffic that it requires quite an acrobatic feat to cross it.

Mr. Acworth, describing the mode of conducting this huge goods traffic by railway, says: "Celerity in goods traffic seems to have been a special feature of English railway management from the very first.

As long ago as 1843 the *Liverpool Times* recorded that 200 tons of merchandise were handed to the Grand Junction at Liverpool on Saturday afternoon and delivered nine hours later, a hundred miles off, in Birmingham. Speaking broadly, it may be said that the whole English goods traffic is nowadays organised on this basis—that the railway receives the goods from the consignor the last thing at night, and hands them over to the consignee the first thing the next morning. A Manchester warehouseman, for example, goes on 'Change in the middle of the day and sells grey shirtings for the China market. When the day's business is over, at six o'clock or thereabouts, his own or his agent's carrier delivers the goods to the station, or it may be that the company calls and fetches them. By seven o'clock the cotton is at the station; by eight o'clock it is loaded on to the railway trucks. It starts at once on its journey, and, reaching London, which is five miles further from Manchester than Paris is from Calais, between five and six o'clock next morning, is unloaded with the same celerity, and the dray is at the ship's side in the docks before the London agent has reached his office to open the letter giving notice of the consignment. Or, to reverse the process, the Bradford woollen manufacturer attends the London wool sales, buys Cape or Australian wool, and then goes home to bed. At quarter-past seven o'clock the next morning his wool reaches Bradford, and after breakfast he can set his hands to work to unpack the bales."

Since Blackmore gave in his novel "Cradock Nowell" such a faithful description of what one believes to be the Chalk Farm Terminus of the London and North-Western Railway, the traffic on this system has marvellously developed. The company do not grapple, like the Great Northern and Midland, with a gigantic output of coal and iron; but with their colossal proportions, with their arms stretching everywhere, they are able to handle an immense amount of general merchandise. You have only to put your head into Broad Street Goods Station, the City depôt of the company, to be thoroughly convinced of this statement. It has an area, high- and low-level, of seventeen acres. Its lines will accommodate nearly 900 standing trucks. It receives nearly 500 loaded waggons daily, and forwards as many laden nightly. No fewer than 1,000 waggons filled with thousands of commodities are dealt with at this station day by day. The unloading platform is every night in an apparently hopeless tangle of goods; the arches beneath the passenger station are full of the life, the bustle, the shout of loading; the great four-storied warehouse is almost bursting with goods, like the granaries in Biblical Egypt with corn; and in the midst of all this modern activity of trade, there lies a curious relic of a time long departed, the fossilised remains of a human giant, said to be upwards of twelve feet in height, excavated near the Giant's Causeway.

If the company have not altogether abandoned the idea of tracing the owner, it might be worth while to send a travelling inspector to Ireland to institute inquiry

among the O'Brien family. It is just possible that the ossified "gintleman" in the huge wooden case at Broad Street may be an ancestor of O'Brien the Irish giant, well known in London at one time because of his exceedingly lofty stature, which enabled him to light



SIR GEORGE FINDLAY.

(From a Photograph by Walery, Regent Street.)

his pipe at the street lamps without climbing, and to kiss the servant girls at the bedroom windows as he sauntered by.

The type of traffic at Holyhead, the north-western depôt of the system, is somewhat different from that handled at Broad Street Station, which may be called the south-eastern depôt. In addition to general

merchandise, there is a vast quantity of live stock dealt with. Here Ireland sends her cattle, horses, sheep, and pigs, her poultry and dairy produce. In a recent year nearly sixty thousand head of cattle, more than one hundred thousand sheep, and no fewer than two hundred thousand pigs, were unloaded and forwarded by the London and North-Western from this port. The once wild, barren coast, shouldering the skerries, has become an important place of transhipment. Its extensive quays on the east and west sides of the harbour are busy with traffic; and the passenger by the Irish Mail, stepping on board the steamer for North Wall, is apt to wonder, as he sees the great hurly-burly, the crowd and jostle of this food-supply, how it is that Ireland is such a poor country with so many sources of prosperity to her hand. She has practically created Holyhead. The directors of the London and North-Western proposed at first to make Llandudno Bay their import harbour, and this picturesque corner of Wales had a very narrow escape of disfigurement. But in 1879 the company acquired the Chester and Holyhead Railway, and Llandudno was left with its beauty untouched.

Holyhead, which had not much comeliness to lose, has enormously benefited by the decision of the London and North-Western to develop the Irish traffic. The railway company have now a fleet of steamers, and have long had a daily service between the two ports. Almost the only notable consignments in the way of live stock shipped from England to Ireland have been two lions and two elephants. The clatter



VIEW OF HOLYHEAD, SHOWING THE RAILWAY (p. 111)

(From a Photograph by Carl Norman & Co., Tisbury Wells.)



all comes the other way; and the yearly income derived by Ireland from this country must be a considerable one. But there is no reason why that income should not be increased. London could take a vast deal more of her food-supply from Ireland if she could only get it. The great city has an unappeasable appetite. She eats up flocks and herds, and "birds of the air, and fish of the sea." When Peter the Great cudgelled his brains, and hammered the hulls of oak in his ship-building lessons in the Admiralty Dockyard, now Deptford Market, London was a comparatively "small eater." Now she consumes four hundred tons of fish daily. She eats more than one thousand tons of flesh-meat per day. In the cold-air rooms of the Dead Meat Market, erected on the site of the old Smithfield Market, no fewer than eighty-five thousand South American sheep have been stored at one time. Not only for animal food, but for vegetables and dairy produce the city's appetite is prodigious; and the time may come when Ireland, applying herself less to political fidget and more to regular earnest work, will do yet more than at present to appease it.

CHAPTER VIII.

THE "ROYAL MAIL" LINE.

Eccentric Passengers on the London and North-Western: Irish Harvestmen and their Ways—An Incident on the Dublin Boat—The Family-Man and his Seaside Holiday—How to Avoid Worry—Collection of Luggage by Van and Dray—The Railway Guard and the Distance he Travels—A Picturesque Figure—The Frenchman and the "Maréchal"—The Guard of the Mail from the North—A Manchester Station at Night—Seeing the Last Train Out—What a Locomotive Can Do—An Imposing Crest—Letters "Franked" and Despatched Half a Century Ago—The Railway the Real Postman—A New Line on the Derbyshire Border—Buxton and the River Dove—Forged Transfers—A Satisfactory Dividend—Sir George Findlay—The Lancashire and Yorkshire Railway—Its Position and Prospects.

THE London and North-Western, though it is supposed to be one of the most aristocratic of our railways, does not disdain the humblest traffic. The Irish harvestman is not such a wild creature as he was a quarter of a century ago; still he is impulsive and erratic, and when he enters a compartment, with his handkerchief-bundle and his sickle, timid people distrust him, and think with dismay that he may attack them with the formidable harvesting implement that has forced its gleaming point out of its straw-twisted wrapper. But the Irish harvestman is harmless enough if sober. It is only when half-mad with drink that he becomes repulsively affectionate, tries to embrace and to kiss you, and then, in swift variance of mood, to whip off your head as neatly as the thing was done in "The Talisman." When

sober he is rather diffident and respectful, and though a little mournful at the decline of farming in England, has not had all the native humour knocked out of him.

With all the political solicitude about Ireland, a Longford, Kilfree, Ballymore, Roscommon, or Ballinasloe reaper is not exactly the sort of companion that Lord Rosebery or Lord Salisbury would choose for a tour in the recess. Still the harvestman must travel with somebody, notwithstanding his eccentricity. No railway company, at the price, could offer him a separate compartment. Having got here, and earned his money in the field to tide him through the winter, he must return home again somehow. The London and North-Western considerately help him back. They "speed the parting guest." They do not permit him to travel by their express steamers, but they issue to him a through ticket at a wonderfully cheap rate from all the agricultural districts on their system. He can journey right away from Lynn, Holyhead, and Dublin to Carrick-on-Shannon for twenty-seven shillings; from Rugby to Athlone for a sovereign; from St. Albans to Sligo for twenty-six shillings and ninepence; and from Lincoln to Castlebar for twenty-two shillings and eightpence.

It is not always that the quarrelsome spirit of the Irish harvestman creates alarm. Some years ago I was crossing from Holyhead to Dublin on a night of drizzle and fog. The boat was going dead slow, and the dismal voice of the fog-horn making everybody think of his sins or of coming disaster, when there was a

dramatic scuffle among the harvestmen in the steerage. I saw the lightning-gleam of a sickle, heard a cry of pain, then wild, uncouth words, and what an old sergeant-major who had been out in the Crimea used to call a "sprattle." But the incident did not disturb the first mate, who was himself tinged with Irish blood and brogue. Hardly stirring his foot on the bridge, he quieted the fears of the better-class passengers by a careless nod towards the harvestmen and the remark, "Let the divvels foight!"

Many of the delights of holiday, it has been said, are far keener than those of daily life; but the tribulations are greater too. Undoubtedly this plaintive sentiment is the outcome of engineering a large family to the seaside. There is, to some sensitive minds, no greater ordeal, no more prostrating tribulation, especially if you have to leave your belongings stranded in the station at the journey's end while you desperately and wearily search for lodgings. Most convivial people are familiar with the humorous song "John Brown's Luggage," and the gigantic task involved in handling it—the barrow piled high with boxes, hampers, bags, shawls, sticks, and umbrellas; the rush through the crowd on the platform; the search for a compartment; the work of settling down in it; the stern duty of seeing the luggage placed in the van, and the secret fear that the vehicle may be shunted and coupled to a part of the train that proposes to diverge miles away from your destination. All these things tend to upset a man's

nervous system. He gets hot, anxious, worried; and as he takes a last scamper down the platform to see if the luggage is safe, and scrambles into the overcrowded compartment just as the guard waves his green flag and the train is on the move, he is every bit as flustered as "the old lady who, on entering the railway carriage, counted and recounted her parcels in great agitation, and exclaimed in despair, 'Lor', I've forgotten the baby!'"

He vows that he will never take such a fool's journey any more—that the quietude and comfort of home are preferable to this wild stampede to a strange place. But next summer "the children want a change," and he goes through the torture again. The London and North-Western are year by year making his yoke easier, his burden lighter. They are prepared, at a small cost, to accept all responsibility with regard to the transit of his luggage—they will send it on in advance. He has practically no trouble. If he is thrifty and economical he can manage without a cab. He has only to put on his hat, walk down to the station with his family, get in the train, and ride away as if he were simply going on a day trip.

Other companies have made, or are making, similar arrangements for the conveyance of luggage so that passengers may be saved the "worry that kills"; and England is such a picturesque land that on nearly every line your bags and boxes may precede you to some pretty heath-bordered village, such as Charlotte Brontë described, or to some remote fishing-hamlet sheltering

beneath cliff and by cave, that reminds you of smugglers' horde and cutlass fight, or to the fashionable watering-place, where style, and parade to the sound of music, are considered the essence of enjoyment.

The company christen their engines with the names of famous men or noted places; but they do not dress them in fine raiment. Like the lady who made mutton broth for her guests instead of turtle soup, because "you see, dear, it's so much cheaper," they paint their engines black instead of green or chocolate. But though they are by no means extravagant in engine decoration they are lavish in one item of railway appointment, and that is in the uniform of their guards. These gorgeous men always arouse respect and often admiration.

Ordinary people, when they travel on the railway, get moped and weary, dusty and dirty, discontented with themselves, and incensed against the rolling-stock, the driver, and the company. It has been calculated that a guard averaging 300 miles per day, six days per week, journeys 93,600 miles per year—and some of the North-Western passenger-guards have almost beaten this record; yet they are always on the alert, attentive and obliging, always spick-and-span, and apparently inured to fatigue. I have often thought it must be their uniform that sustains them, that keeps them up; for a man is capable of far more toil when he is proud of himself, and his vanity is gratified, than when his apparel is mean and his position obscure. Anyhow there is no more picturesque

figure in modern English life than the North-Western passenger-guard, with his dark-hued semi-military garb, bright with silver braid, and adorned with glossy, silver-mounted, shoulder-belt, as he stands erect, blowing his whistle, or waving his flag, or with stately courtesy that comes from long mixing with the world, shows a party of distinguished travellers to a first-class carriage, or lifts, with fatherly care and solicitude, some poor woman's child into a third-class compartment. A French comrade of mine, paying his first visit to England some years ago, was quite overpowered by the dignified and quietly-polite bearing of one of these guards. He was so commanding in look, so firm and yet gentle in manner, so unobtrusively obliging, that my friend was quite captivated. He stood in admiration on the platform at Euston, and was in doubt for a little while as to whether he had been introduced to the commander-in-chief of our land forces, or a *propriétaire* of the railway. I tried to explain that the man was, to use a common phrase, "only a railway guard," but he altogether declined to accept the definition, replying, in a quaint jumble of French and English, "Ouf!—ah—oui—you means ze maréchal. He is grande, magnifique! ven he vaves—ven he vot you call brandish ze bâton!"

Like Brunel, this guard can stay up all night, and apparently thrive on his vigil. He is as brisk as a bee as he bustles about the platform at London Road Station, in Manchester—a somewhat dismal station, though it echoes with the cheery voice of

the shunter, and the electric light does its best. He actually imparts some of his own energy to the terminus. He takes a comprehensive look at the 10.55 p.m. London and Dublin Mail (change at Crewe), then disappears into his van ; but he is out again in a moment. He has a word for the drivers of the old red mail-carts that clatter and creak to the train side with their loads of letters from the General Post Office in Brown Street ; he has a chat with the " Travelling Post Office " men, drumming with his fingers meanwhile on the late letter-box that has just been fixed outside the carriage, between the crest, with its motto " *Honi soit qui mal y pense,*" and the bulging netting, that will soon be crashing up and down in the darkness with the mail-bags in its grasp ; he looks into the first-class compartments to see that all is right, and to wish, perhaps, however great a pride he takes in his duty, that he could spend a week or two in complete rest at one of those delightful watering-places pictured so deftly by photograph or platinotype over the hat-racks ; he climbs into the huge parcels-van and cracks a joke with the sorter, and then strides to the great, throbbing engine and says something that makes the faces of the trusty driver and stoker light up with humour as well as fire-glow.

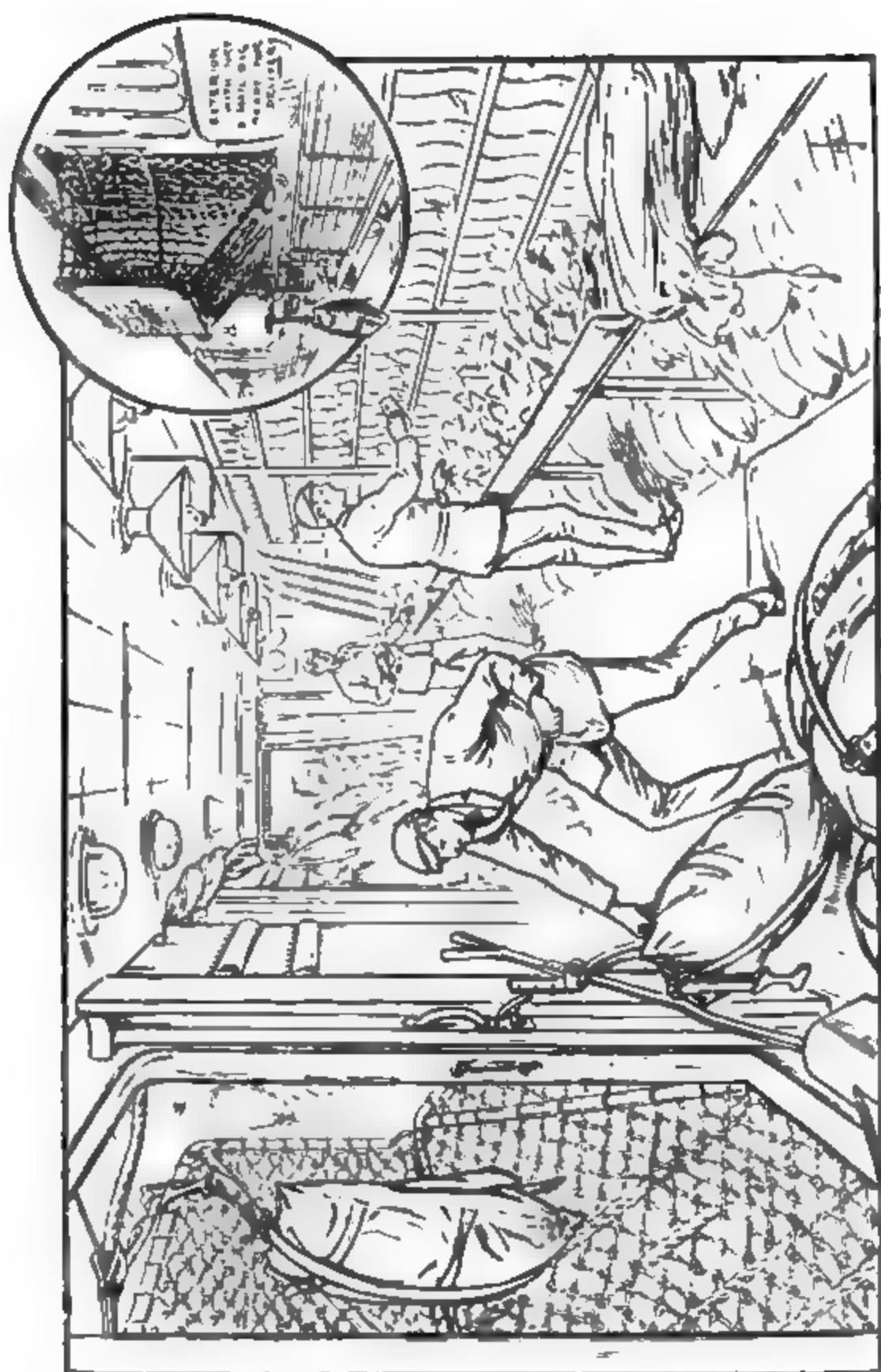
Now he has seen all the passengers safely in the train, given whistle and hand-wave, and swung himself into his van, and away goes the mail with her tail-lights flashing in the darkness like the eyes of the Arimaspi, who kept on the watch by the Scythian river lest the griffins should creep down the golden sands and steal

their treasure. You have seen the mail out and the station lights turned down ; your curiosity is satisfied ; but you have a lingering thought nevertheless of the train that has gone into the night, and of the life it



HOOKING ON THE MAILS.

contains ; of the clerks busy letter-sorting, or of the work among the parcels ; of the passengers, awake or asleep, travelling towards happiness or misery ; and, perhaps most of all, of the sturdy, begrimed figures moving in



INTERIOR OF A MAIL CARRIAGE

the light and shadow on the footplate, and easily controlling the engine, however wildly she pulsates with strength and flings her smoke and vapour in prodigal wreaths across the country-side, as she tells them with scream and nudge that she longs to go faster than sixty miles an hour.

In chapters on railway coaches and on the curious types of locomotives that have run on rails, I have shown that the London and North-Western Company, though they have still some crotchets, have in engine-building and in the provision of luxurious passenger-carriages, kept abreast of the other great companies; but while the giant locomotive "Greater Britain" is running the test of wear,* and the superb engine "Queen Empress," taken across the Atlantic and put together by fitters from the workshops at Crewe, is showing her pace on an American track, it may be interesting to refer to the durability of the London and North-Western locomotive "Charles Dickens." It has been running on this line between Euston and Manchester since 1882. In September, 1892, it had made 2,650 trips from town to the northern city, and traversed one million miles. The engine, doing its daily journey both ways, with occasional rests for repairs, never had a breakdown, and had

* Early in 1893 Mr. F. W. Webb, in order to test the power and capability of the "Greater Britain," decided to run her between London and Carlisle for six days continuously. She was double-manned, and ran from April 17 to April 22, covering a distance of 3,612 miles, which included twenty-four miles' running between the engine sheds and the stations at the end of each journey. She pulled some of the heaviest express and mail trains, and her average speed was 47·66 miles per hour.

worn so well that she was found on the occasion of her last overhauling to be as fit for service as ever.



ARMS OF THE MIDLAND AND LONDON
AND NORTH-WESTERN COMPANIES.

The Midland Railway Company have in their coat of arms a buck couchant. They stamp their time-tables and their literature with the sportive animal that is conspicuous in the borough seal of

Derby, leading one to the inference that the county town was years ago the abode of deer. The London and North-Western have a more striking heraldic device. They adorn their time-tables with the figure of Britannia, and with lions rampant and couchant. Other lines carry the Royal mails northward, southward, eastward, and westward, but the London and North-Western, like the sauce-maker to the Queen, have made the most of Royal or Government favour, and proclaim their line everywhere as "The Royal Mail Route to Scotland and Ireland." The announcement impresses the traveller; the company gain dignity and position from it, and they deserve whatever benefit it confers, for they are, on the whole, careful and punctual letter-carriers.

A marvellous change has taken place in the postal service in the past half-century. It is only fifty-three years since Rowland Hill did for the inland postal service what Mr. Henniker Heaton is now trying to do for the ocean service. A few years ago there came into my

hands a bundle of George Eliot's letters written before she was famous as a novelist. They were indited from Griff, near Coventry, in 1839, and had quite an ancient look in these days of fancy note-papers and envelopes of every artistic shape, for they consisted of sheets of blue post paper, and the address, "Mr. S. Evans, Millhouses, Wirksworth," was on the outer sheets, with the word "free" beneath, indicating that the future writer of "Adam Bede" and "Daniel Deronda" had paid the postage, which was, perhaps, too great a tax on her uncle's means. Envelopes at that time were not in common use, and letters, owing to the high price of transmission, were a luxury that the poor could but rarely afford. It is the railway that has made penny-postage possible. It has, notwithstanding the outcry about railway rates, been the creator of cheap communication; it has pushed the old system of "franking" letters into desuetude: it has given us the cheap newspaper, for the daily newspaper could not live without rapid distribution; it has not only enabled St. Martin's-le-Grand to sustain the character of the penny-postman, but it has also developed the postcard, the letter-card, and the open envelope, enabling statesmen and traders alike to keep themselves and their wares constantly before the world at the smallest possible cost.

The London and North-Western are now paying particular attention to the Midlands and to Yorkshire, and in Derbyshire are constructing a new line that will open up a pretty bit of country. "They are," as I

have written in *The Times*, "making a railway from Ashbourne, by Dovedale and the old-fashioned village of Hartington, to their Cromford and High Peak track; and this undertaking will not only develop the agricultural and industrial capabilities of a district entirely new to railway travelling, but place Buxton practically nearer town. For centuries London has had an acquaintance with Buxton. In the time of Henry VIII., Lord Cromwell, by the help of Sir William Bassett, tilted at superstition there, sealing up the baths, carrying away the crutches and sticks of the infirm, and ruthlessly removing the images of St. Anne, a lady who was supposed to possess remarkable curative power. The Earl of Leicester drank the waters at Buxton; so did the Earl of Sussex, 'begynning with thre pynts, and so increasing dayly a pint till I shall agyne reterne to thre pints, and then I make an ende.' Many things have changed at Buxton since then, and the Spa to-day, with its Crescent and tempting baths and pleasant gardens, is the haunt of the aristocrat, of the wearied judge, of the jaded legislator, and the society beauty—it is almost as well known as Rotten Row.

"But London has lost touch with the land lying south-east of Buxton and stretching away to Ashbourne—a picturesque land, distinctive because of its natural loveliness, its traditions, and literary associations. Isaak Walton knew it more than two centuries ago. He gladly got away from his hosier's shop in Fleet Street, and went northward by coach in the

spring-time, to throw flies for trout in the river Dove. What days of happiness he spent by the whispering waters, out of London's roar of traffic and struggle for gain or fame; taking refuge, perhaps, in storm, in some whitewashed cottage, and listening, half incredulously and half in awe, to gossip that turned on local legends—how through this dale 'Noah's flood once roared,' and that something dreadful was going to happen because a white cricket had leapt across the hearth. A quiet, unremorseful life he led hereabouts, quaffing Derbyshire ale, may be, at the inn at Hartington with the quaint sign of 'The Silent Woman' (a headless female); or chatting with the solemn functionary who carried the stave at the Court Leet; or dropping down the wooded crest from the village to his grey-stone fishing-house among the trees, by the Dove-side in Beresford-dale; or tramping through the ferns and along the meadow, flecked with lady-smocks, to cheer his friend Charles Cotton, who was hiding in a cave hard by from his creditors; or striking deftly some big fish he had lured with a favourite fly as the shadows of night were creeping about Thorp Cloud, the lofty hill that stands sentinel at the head of Dovedale. On the benefits the new line will bring to the people living on the fringe of this 'sleepy hollow' it is idle to comment, for industrial energy and trade activity invariably follow the railway-trail; but there is one source of regret in the project, and it is that the London and North-Western Railway Company have abandoned a portion of the scheme—the

utilisation of the lower length of the whimsical High Peak Railway.”*

The Forged Transfers Act, passed in 1891, explains its own object. The London and North-Western Company, almost the first on whose stock frauds were practised as adroitly as though they had been the work of “Jim the Penman,” were urged to take advantage of the Act. The directors looked upon it as merely an enabling Act, as giving the company power to pay compensation for any forged transfer. They considered that it would be unwise to say that in all cases compensation should be paid. There were cases of forgery and collusion combined that were very difficult to detect, and in such cases they thought the shareholders should not have the onus of making compensation to the parties who suffered. Most of the great railway companies, however, adopted the Act, deciding to guarantee the validity of their certificates. The Midland Railway Company, in fact, considered the risk slight, and it was pointed out that in the history of the company there had only been one case, in 1859 and that was a case in which the principal repudiated the act of his inferior. On the London and North-Western the difficulty was not so easily disposed of.

* Within the past few months the London and North-Western Company have let the contract for the construction of the line through to Ashbourne. Considerable progress has already been made with this track, which partially utilises the upper portion of the High Peak Railway, and, it is pleasant to know, will leave the beauty of Dovedale untouched. South Derbyshire, too, has been in a ferment of railway enterprise; and it is by no means improbable that the lower length of the High Peak line may ultimately be brought into use.

Discussion upon it was continued up to the spring of 1893, when Mr. Bickersteth, presiding at the shareholders' meeting in the absence of Lord Stalbridge, said that the Board had at last determined that on the 1st of December, 1892, the provisions of the Act should take effect, and from that date the payment of a fee of 1d. for every £25 of stock transferred had been levied. When a sufficient fund had been accumulated to meet the risk of forged transfers, the directors might propose that the charge should be discontinued.

Reference was made at this meeting to the trade depression that had prevailed for some months, and it was stated that there had been a diminution in the receipts both from passenger and goods traffic, though more than one million additional third-class passengers had been carried. Consolation was, however, derived from these facts—that the receipts for season tickets had increased, that the mineral traffic was steadily expanding, and that the company, in spite of all the difficulties against which they had to contend, were able to pay a dividend at the rate of $7\frac{1}{4}$ per cent. For the first half of 1894 the dividend was $5\frac{3}{4}$.

Death has been busy during the past few years among men notable in railway construction, management, and development. It has taken Sir John Hawkshaw, the engineer of the Severn Tunnel; Sir James Allport, general manager and director of the Midland; Thomas Cook, the excursionist pioneer; and more recently one of the most conspicuous figures in the London and North-Western system—Sir George Findlay, the veteran

general manager. Few men crowded more useful work into life than Sir George. For nearly half a century his sturdy form and shrewd, active brain went to and fro on the railway. He followed Lord Eldon's advice for years, "living like a hermit, and working like a horse ;"



SIR JAMES ALLPORT.

(From a Photograph by W. W. Winter, Derby.)

and he thrived on this active career, growing old and white-haired in the service, but keeping ruddy and vigorous, showing little trace of the railway manager's anxiety on his face, and bravely fighting the "gout demon" till the spring of 1898, when he died at the age of sixty-three. George Findlay combined a genial disposition with an inflexible will. He

book, demonstrated, by means of diagrams of the new excursion sidings at Llandudno, how quickly troops could be concentrated at a given point to repel the invader. Honours came to him in recognition of his earnest work. He was a French chevalier and an English knight; but his most gratifying distinction was the consciousness that he never flinched from duty, and his pleasantest recreation that of throwing the fly for salmon or trout, in which pastime he was as skilful as John Bright, and gave the lie to those who sneer at Isaak Walton's art, proving that though there must be a fly at one end of the line there is not always a fool at the other.*

The London and North-Western Company are not often troubled with the amalgamation fever, but some shareholders think they would like to annex the North Staffordshire Railway, and others that they would not object to lease or graft the Lancashire and Yorkshire Railway. The latter company, almost from the day the system was established in 1847 by the amalgamation of the Manchester and Leeds, the Manchester, Bolton and Bury, and other Lancashire and Yorkshire lines, have been in a cross-fire of criticism. Not even the Eastern Counties Railway Company received more ridicule. Their management and their rolling-stock have been condemned in language more forcible than

* Mr. Frederick Harrison, for some years the chief goods manager, has been appointed the new general manager of the company. To quote the words of a very humble member of his staff, he is "a keen un for business, wi' a shrewd head," and has already proved that he thoroughly realises the importance of railway enterprise for the passengers' as well as the proprietors' sake.

the dialect with which Edwin Waugh has made people familiar. The Lanes-line operative has cursed the train-service by day and night. He has contemptuously snatched from the heap of adjectives in his mind many an ingenious expression descriptive of the tardiness of the company that persists in making him kick up his heels in a siding when he "owt to be thrutchin a whoam." There are romancing stories told of journeys that threatened, like the Wandering Jew's, never to end. It is said that a train once crawled so slowly from Blackpool to Manchester that tufts of grass were found growing in the axle boxes when the locomotive eventually reached Victoria Station; and it must be confessed that a Sunday ride from the seaside resort to Manchester still gives one time for reflection. It requires more patience than Jacob possessed when he served twice seven years for Rachel.

There was a time in the history of the undertaking when it yielded eight per cent., but for some years after the amalgamation, and chiefly owing to the high price paid for the tracks acquired, the system was financially "a perfect wreck." The line, which was constructed by Sir John Hawkshaw, is, roughly, five hundred miles in extent, and though some of the stations and some of the trains do not suggest the idea that the directors are at all extravagant, the maintenance and working are expensive. The concern costs £90,000 a mile, and unless the railway is leased to some big company, or strikes boldly northward or southward, or in any direction out of the *cul-de-sac* in which it runs, the cost per

mile is not likely to diminish. The chairman's grievance is that the company have only a short-distance traffic, and that the line runs through a manufacturing country where the wages of the servants are practically governed by the wages rates of the district. It is not often that a railway chairman is dissatisfied because his line goes through the busy haunts of men. A railway "far from the madding crowd" may be an attractive hobby to an amateur engineer, like the diminutive line in Mr. Percival Heywood's South Derbyshire garden; it may prove a whimsical source of pastime even to a humourist, like the toy line in Mr. George Grossmith's cellar; but, as a commercial speculation, as a dividend-payer, a railway's best track is through a manufacturing district.

There is no richer railway field than South Lancashire. In Manchester and the cotton-manufacturing towns that have grouped around her there is an immense population. Manchester and Salford may be reckoned at 726,000, Blackburn at 125,000, Bolton at 118,000, Burnley 96,000, Bury 56,000, Oldham 138,000, Preston 111,000, Rochdale 26,000, St. Helens 71,000, and Stalybridge 44,000. The railway is in touch, more or less, with these and other centres of industry and vigorous commercial life. The line, on the one hand, serves Liverpool, where the company possess, in the Exchange, a most commodious station; on the other, it stretches away to Leeds and Goole, and has running-powers into Hull.

The compulsion line to Southport is one of the

company's last-gasp effort. When the North British Railway was opened into a railway, the traffic was carried by rail to Blackpool, and the line was extended to the sea-side by means of a branch line in the year 1852. However, when a company was formed to construct a main line connecting the Blackpool and Wigan



THE RAILWAY STATION AT BLACKPOOL IN 1852.

Company to finish the track, that the railway was carried forward from Wigan to the popular watering-place. In Blackpool the Lancashire and Yorkshire Company have a treasure coast. No fewer than two millions of visitors go to this breezy place every year; and much of the traffic is rough-and-ready, curses or jests at overcrowding, endures a great deal of inconvenience without tormenting the directors,

and seldom tries to cheat the company out of a fare.

But perhaps the most vivid picture of a Lancashire crowd is to be obtained at the company's station in Manchester. Originally the city possessed four small railway termini, and passengers had to walk and traders to cart their goods across the town to the line they needed. People became exasperated, and it was proposed that a central passenger station should be erected at Store Street, now a street of warehouses not far from the business heart of the city. Hunt's Bank, however, was finally chosen as the site, ostensibly because it was the nearest to the Royal Exchange, but really because it was the cheapest. The mile of arches at Salford gradually assumed unpicturesque form, and the great station at Hunt's Bank was built, and opened on January 1, 1844. There is not much of the style and dignity of a monarch about it, but the station—then the largest in England, having an area of eighty thousand square feet—was named after the Queen, and is still known as Victoria Station.

A primitive method of locomotion then obtained. Along the steep incline on the Leeds side of the station, the trains were propelled by a stationary engine and a wire rope running on pulleys, after the fashion of train-working which, as we have seen, prevailed about the same time between Camden Town and Euston Square on the London and Birmingham Railway.

Now the station is crowded with trains, and passengers are ever running through the subways or

struggling on the platforms to get into the carriages. To the nervous this station is a bewildering place. The noises that fill it would terrify even a Wagner. But if you are impervious to headache, try to pass half an hour on the platform. You will have the advantage of both mental and physical exercise if you happen to stroll along it. You will see the earnestness of English industrial and commercial life—the mill-hand, the artisan, the warehouseman, the merchant, the broker, and the cotton lord going about their business; and you may find yourself suddenly struggling for breath in the midst of a Lancashire going-away club, or a great mass of rattling human life that has come by special train from shuttle and shed to see the final tie for the English Cup.

The company have an enormous number of passengers and a great bulk of merchandise ready to their hand, but they cannot carry them so far as they would like. As one of the shareholders lately remarked: "We are simply the jackals, and the other companies run away with the plunder." The company have a capital of forty-eight millions; their receipts amount to four and a half millions a year, and they manage to pay the ordinary shareholders four per cent. They are honestly trying to make their traffic more profitable; they are line-widening and station-altering; they hope to get an increased trade by running down to the Ship Canal, and in association with the London and North-Western they are striving to develop a steamboat traffic with the Isle of Man and Ireland; and they have, at all

events, the elements of great prosperity in their system. Two things they are proud of—one is their station at Fleetwood, and the other their railway works at Horwich, which are undoubtedly the best in the country.

The company, on the other hand, have lately had two drawbacks: they have been pressed by the imperative need of reducing the working hours of their servants and enlarging their staff; they have also found their receipts decreased through the dispute in the cotton trade which began in November, 1892, and continued till nearly the end of March, 1893. Traffic in cotton, coal, and coke shrank. The stoppage of the mills drove some trade abroad and caused much misery at home. The privation was not nearly so general and acute as during the Cotton Famine of 1862; but the struggle against a reduction of five per cent. in wages resulted in the loss of an enormous amount of money, both to cotton operative and to master spinner.

[The page contains extremely faint, illegible text, likely bleed-through from the reverse side.]

The fact that the directors of the Midland system are at last, we think, coming to the conclusion that the Government is determined to do its utmost to assist the railway in its work, and the railway itself is now proceeding to carrying out and strengthening the steps which have already been taken, is the source of comfort in the West along the rails and beyond the hills of the Peak of Derbyshire to Manchester and Liverpool and along themselves through Yorkshire to Barrow in the north and over the rough land to Cardiff in the south. The Midland Railway is now recognised as a railway giant. It has a huge frame worked with great vigour and enterprise not only for the benefit of the shareholder, but also to the advantage and convenience of the passenger, and it has undoubtedly got a good name. The company have

always believed in a bold policy, and there are several notable deeds and works that stand out conspicuously in their career—their successful penetration to London, and the erection of the fine station and hotel at St. Pancras; their engineering triumphs over the physical formation of the Peak and the still wilder solitudes



OLD DERBY STATION.

beyond Settle; and their announcement on January 1, 1875, that henceforth second-class carriages would no longer be run upon the line, and that the third-class passenger would be carried with more comfort.

It sounds almost like fiction, but it is true, nevertheless, that the Midland Railway, which has an authorised capital of one hundred millions sterling, and which carries forty millions of passengers yearly,

was created out of a beefsteak dinner at a village inn near Rainhill cutting. Mr. John Ellis, of Leicester, at the request of a number of Midland coalowners, sought George Stephenson, found him busy in the cutting, and so angry with the difficulties that the Liverpool and Manchester Railway was unfolding



THE PRESENT DERBY STATION.
(From a Photograph by W. W. Winter, Derby.)

that he declined to consider any other project. But John Ellis soothed the irate engineer, and induced him to go to the tavern hard by for dinner. The beefsteak was tender and succulent, and the guest at last consented to inspect the ground over which the pit proprietors were anxious to send their coal by rail.

The Leicestershire country, the home of the fox-hunter and the arena of hard riding, was just the land

for a railway engineer. Neither huge crag nor deep morass barred his progress. George Stephenson admitted that a line could be easily made there, and was offered the control of the work, but he had no liking for over-pressure; and saying that the thirty-one miles of railway on which he was then engaged was enough for any man at a time, he rejected the position of engineer to the new railway. But his native shrewdness was revealed even in the refusal of the appointment. It did not go out of the family. He recommended his son Robert for the position, and it was given to him, George not only undertaking that the line should be well made, but raising a large amount of capital, chiefly among Liverpool merchants, towards its construction.

The railway, which ran from Swannington to Leicester, was opened on July 17, 1832, the first train being pulled by the engine "Comet."* The line encouraged the local coal trade, and gave the canal owners a rude shock. It really meant quicker delivery and cheaper fuel. It was a blessing to Leicestershire pits near its track, but it was a curse to the Nottinghamshire and Derbyshire pits far away from the line. The owners of these collieries could not, with only the

* Mr. Williams, in his book on "The Midland Railway," writes: "One spring morning Mr. John Ellis said to his son, then a lad of fifteen, 'Edward, thou shalt go down with me and see the new engine get up its steam.' The machinery had been conveyed by water from Stephenson's factory at Newcastle-on-Tyne to the West Bridge Wharf at Leicester. It had been put together in a little shed built for its accommodation. It was named the 'Comet,' and it was the first locomotive that ever ran south of Manchester. The new line was opened amid great rejoicings, and the roar of cannon that had been cast for the occasion."

slow-moving, lock-hindering canal for transit, compete either in speed or in price with Stephenson's road ; and found that, even with desperate proposals and marvellous reductions, they were unable to quote with coal-owners having pit-mouths at Swannington and Snibston. Like wise men, they availed themselves of the valuable experience of their competitors. They came to the conclusion that their coal must find its market by railway, and resolved at a meeting at the Sun Inn, at Eastwood, on October 4 in the same year, that "a railway be forthwith formed from Pinxton to Leicester, as essential to the interests of the coal trade of the district." Thousands of pounds were subscribed, and ultimately out of a chaos of projects, sprang the Midland Counties Railway, with a capital of one million. The line, of which Vignoles was the engineer, had for its object communication between Nottingham, Derby, Leicester, and London, ignoring Northampton's plea, and joining the London and Birmingham Railway near Rugby. While disappointing Northampton, the promoters made a rod for their own backs. When the Bill was introduced to the House it was shown how the trade in wool was crippled by the heavy cost of carriage, whether in canal-boat or fly-wagon ; but the claims of coal can hardly have been sufficiently pressed, inasmuch as the Erewash Valley line, now so prolific in mineral traffic, was actually abandoned in order to save the life of the Bill.

The first spadeful of soil was turned in the midsummer of 1837, and in the following spring, when no

fewer than 3,500 men were engaged on the track, an exciting example of working against time was afforded. Even a more curious difficulty presented itself than that on the Manchester Ship Canal in July, 1891, when, during the diversion of the water at Ellesmere port, the embankment that had been placed in the Mersey gap was swept away, and men had to work day and night to repair the mischief. At Spondon, near Derby, the difficulty was one relating not only to the water, but to the traffic upon it. It was imperative that the canal should be diverted in order to run the line between this waterway and the river Derwent; but it was impossible to divert the canal without stopping the progress of the boats, and for this suspension of traffic compensation at the rate of two pounds per hour was demanded. Mackintosh, a man of resource, who had risen from a working navy to a millionaire, was the sub-contractor of the line, and with all his restless mental energy could not see any way of escape from the tax. Good fortune came to him, however, in a surprising fashion. The canal suddenly became unnavigable, and required such immediate repair that Mackintosh was able to divert the length of the waterway affecting the line without the slightest hindrance to the traffic, working incessantly with many men, and much to the amusement of the locality, to avoid all payment of compensation, a feat he successfully accomplished.

The railway, which was two years in construction, was opened—at all events, the Nottingham and Derby section of it—on May 30, 1839, and the lacemaking

town, with its romantic traditions and its strange legends about Robin Hood and Little John, was face to face with a new force. The interest in the line was amazing. The prim-looking station, standing at the base of the Nottingham Castle Hill, was crowded; the park was thronged; so were many of the housetops.



OLD NOTTINGHAM STATION.

The whole town was eager to see the first train run out, and the five hundred favoured passengers who received tickets, emblazoned with gold bearing the arms of the company, entitling them to reserved seats in it, were much envied. A start was made amid the ringing of church bells, the blowing of horns, and other demonstrations of rejoicing, and the journey to and from the town that is now the headquarters of the Midland Railway Company was done safely, the

engine on some parts of the line going at the rate of forty miles an hour.

In the meantime there had been an outcry for a railway northwards, and towards the end of 1835 George Stephenson and his secretary, Mr. Charles Binns, had gone over the ground, now in a post-chaise and then on foot, selecting what they considered was the best route from Derby to Leeds—the track of the railway known for years as the North Midland. Stephenson, anxious to avoid big embankments, long tunnels, and severe gradients, was in favour of taking the line through the valleys and of letting the towns shift for themselves, urging that their chief business as a railway was to serve the mineral traffic. Vignoles, on the other hand, contended that the high-level route would be the best, and pointed out that the towns needed serving as well as coal and iron. A special survey was made by Mr. Frederick Swanwick, who knew every hill and dale in Derbyshire, and he went carefully across the county from Chesterfield to Sheffield, hoping to find a way into the latter town. But his report was disheartening. The gradients, if the line was carried through Dronfield, would be so steep that he doubted if a locomotive could drag a load along them, and the tunnelling would be so frequent and continuous that the expense would be enormous.

Mr. Swanwick's survey of the proposed line is instructive in more ways than one. It not only shows that in the engineering opinion of that day a line through the hilly parts of Derbyshire and Yorkshire

was impracticable, or, at any rate, too costly, but that the old prejudice against railways was not quite lifeless. Vignoles had been threatened with arrest as a night poacher during his survey, and Mr. Swanwick, prospecting near Wakefield, was dogged by Sir William Pilkington's watchers. Mr. Charles Waterton, the traveller and naturalist, had his place near, and he could conscientiously say, like Colonel Sibthorp, "I hate these infernal railways as I hate the devil." His park was a wild paradise, full of fine old trees and field flowers and trailing foliage, and it was the home of rare birds and strange animals he had picked up in his roaming through foreign lands. It was his boast that he could extend "a hearty welcome to every bird and beast that chose to avail itself of his hospitality; and by affording them abundant food and a quiet retreat induce them to frequent a spot where they would feel themselves secure from all enemies."

The Barnsley Canal, however, with its creaking locks and gruff-voiced men, had threaded its way to his gates and destroyed his quietude, filling him with rage. Consequently, when asked if he would allow the new line in his park he said, "No; I am most confoundedly opposed to it;" but on being pressed, even if he could not support the project, to take only a neutral attitude, he replied, "I will be neutral on condition that you will faithfully promise me one thing—it is, that you take care that your railway, when it is established, shall ruin those infernal canals."

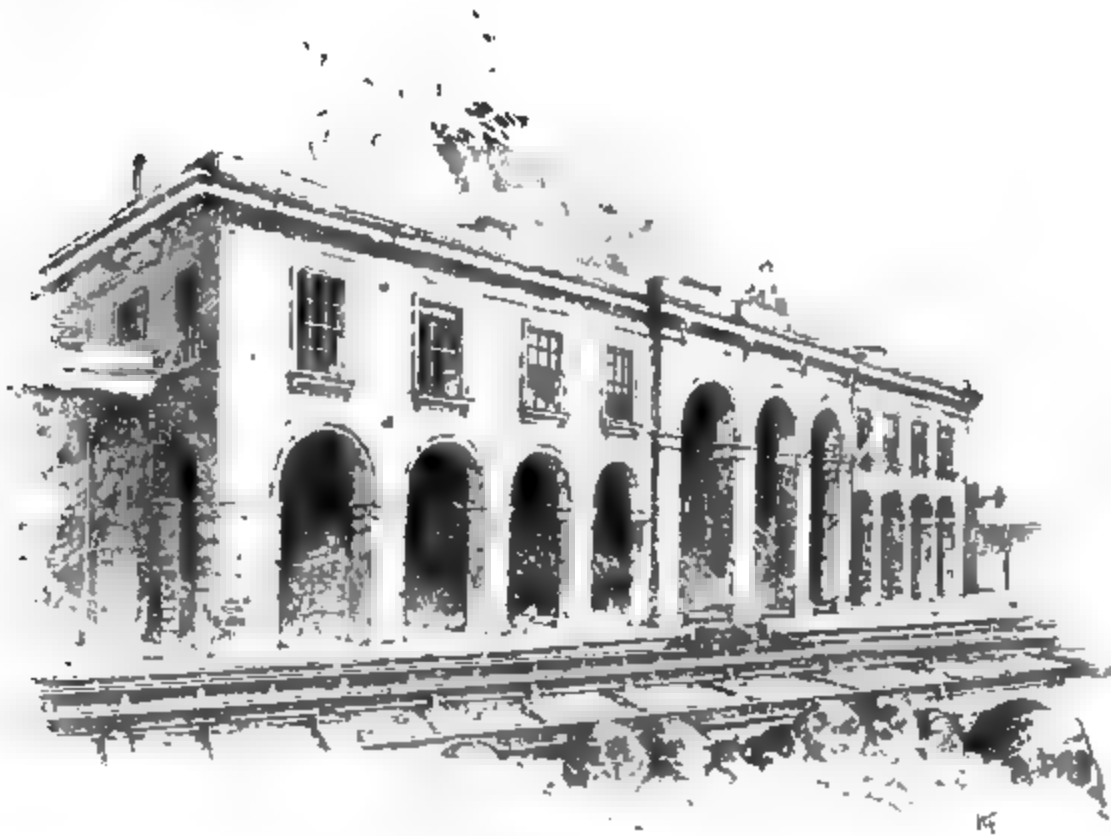
The treatment of Sheffield by the old North

Midland line has a touch of the ludicrous. The track ignored the great centre of industry which has now a population of 338,000, and which will soon rival Manchester, Birmingham, and Leeds in the beauty of its street architecture. The promoters of the line, scared by the engineering difficulties, were content to lose the profit of this city, with its skilful, industrial possibilities and growing trade in hardware. The old railway wriggled behind Sheffield by a sort of back way to Masborough; and as a boy I remember shivering and waiting at that station for the train to take me on, as it seemed almost stealthily, into the dismal-looking passenger-station in the Wicker, which was then the only way by rail into Sheffield.

The passengers on the first journey had, according to the *Sheffield Independent*, the utmost diversion. "The line was opened on October 31st, 1838. A pilot engine was sent first, and then followed the train itself, with its 'very elegant' carriages painted yellow, carrying Earl Fitzwilliam, the directors, and other influential persons, who were delighted with the 'wonderful velocity' with which they 'shot along,' and who wondered still more when on the return journey they passed the pilot engine."

The line was ultimately superseded, and the city of steel and cutlery placed on the main route to the North. Earlier the industrial and commercial claims of Sheffield got scant justice, owing to the many difficulties that beset the railway project. Right away from Belper to Leeds the line had to run

the gauntlet of opposition. The Strutts of Belper, fearing interference with the water supply essential to the working of their cotton mills, insisted that the railway, instead of traversing the valley on the west of the nailmaking town, should go by on the



THE OLD WICKER STATION, SHEFFIELD.

east, and there it dives to-day into a deep cutting that altogether hides from the passenger the beauties of this picturesque Derbyshire place, which has lately developed a new industry, that of the manufacture of hosiery.

The feud of canal against railway also cropped up again, and the Aire and Calder Navigation strove diligently to thwart the railway promoters, knowing that the line would destroy their monopoly of Yorkshire trade.

There were other opponents, too, who did their utmost to ruin the chances of the Bill; but after much hard work on plan and estimate, and many a wild ride in coach and on horseback, the evidence was completed and the Bill carried through the House of Commons. The canal interest, nevertheless, fought to the bitter end, and in the House of Lords secured the insertion of several obnoxious clauses with the object of crippling the operations of the company. So drastic were these clauses that the company endeavoured to arrange terms with the canal owners, but were met with the cool proposal from the latter that before negotiations were entered upon the railway company should repay the entire cost of the canal opposition in Parliament—a suggestion that one friend of the North Midland likened to the conduct of the schoolmasters who extracted from the pockets of the pupils the cost of the rod wherewith they themselves were to be flogged.

The railway company did not possess the autocratic privileges of the Emperor Nicholas of Russia. When he was asked to decide upon the route of the line between St. Petersburg and Moscow he contemptuously tossed aside the plans placed before him, ordered a map to be unrolled on the table, put his sword across the map, and drawing a straight line from one city to the other, regardless alike of rights of way and rights of property, flung his inexorable plan to the astounded surveyor, saying, “*Voilà votre chemin de fer.*” The North Midland had to proceed cautiously. They did not yield to the excessive demands of the canal owners;

but adroitly deviated the line near Leeds, and succeeded in removing all obstacles to the construction of the railway.

In 1838 many men were at work on the line. Some headway had been made with Clay Cross Tunnel, with the underground way at Ambergate, and with the cuttings at Oakenshaw and Normanton. For three years the labour was continued, often with difficulty and nearly always with ingenuity and anxiety, one of the most curious pieces of work being at Bull Bridge, a little north of Ambergate, where the line crossed the river Amber, and ran beneath the canal, which was carried over the track by means of an aqueduct. The railway, having no fewer than 200 bridges and seven tunnels, required an outlay of about three millions of money. It was opened on May 11th, 1840, when a train consisting of thirty-four carriages, conveying 500 passengers, ran from Leeds to Derby, being received at the latter place with much cheering by a large crowd. The journey occupied five hours; and the passengers, on arriving at Derby, were entertained to luncheon on the station platform, two rows of tables bearing generous refreshment being set there, while music was played to aid the digestion of the travellers.

The ride from Leeds to Derby now, to the half-yearly meeting of proprietors, does not take so long. The shareholders, alighting from saloon or first-class compartment, get their luncheon not at tables set in rows on the platform, but in the well-appointed refreshment-room or the hotel close by. The large station

with its sets of lines and many platforms, is in the bustle of travel and business, and the only music is that made by hurrying feet and the locomotive's voice. Perhaps some shareholder, coming from London, Manchester, Bristol, Nottingham or Leeds, as he makes his way at noon through the throng of railway passengers across the platform towards the station entrance, gives a passing thought to the remarkable growth of the system that began its practical work at this station fifty-five years ago.

It may occur to him that the railway, in addition to its development of trade and its creation of facilities for pleasure, has evolved a special type of man. The railway shareholder is certainly not as other men. There is something it is difficult to define, yet something distinctive about him : an air of solid prosperity that is superior to foppery of dress and is not concealed by shabbiness of apparel ; a dignified confidence and a comfortable gravity that stamp him as a man in possession of wealth. It is possible that he has a large holding ; that he is accustomed to the rustle of bank notes and the crackle of scrip, and that he invariably carries a cheque-book. Such a man cannot do otherwise than command respect, especially in this country where the worship of money runs other forms of devotion a very close race.

Come with this shareholder to the meeting. There is a crowd of substantial men grouping about the doorway ; they all have the same affluent look. One or two are grumbling about the dividend, thinking it

might have been fixed another quarter higher; but, on the whole, the greetings and comments one sees and hears on going up the steps to the shareholders'-room are those of contented men. The staircase is thronged with railway stock-holders, who have left their names with the clerk at the little table in the hall below, and got their free tickets stamped for the return journey.

The room, which is adorned with portraits of former chairmen of the company, notably those of Mr. John Ellis, Mr. E. S. Ellis, Mr. W. Hutchinson, Mr. W. E. Price, and Sir Matthew Thompson, is nearly filled. The fingers of the clock point to half-past one. A door at one end of the platform opens. The chairman enters the room with a bow and a bundle of papers. He is accompanied by the directors and some of the officials of the company, and before they have settled in their seats and the reporters have pelted the secretary with requests for copies of the half-yearly report, or for other information, the hall is crowded to excess.

The meeting has none of the fervour and enthusiasm of a political demonstration. It is earnest and business-like. The chairman, who is received with a little decorous applause, suavely asks the secretary to read the notice convening the meeting, dexterously and swiftly affixes the seal of the company to the register of shareholders, and in a moment is up to the neck in figures, handling the report deftly, explaining cleverly how much the passenger and goods traffic of the half-year has yielded, what profit available for dividend has

been made, and indicating in what direction the system is extending.

The speech, plain and terse, is a marvel of rapid talking. The share-



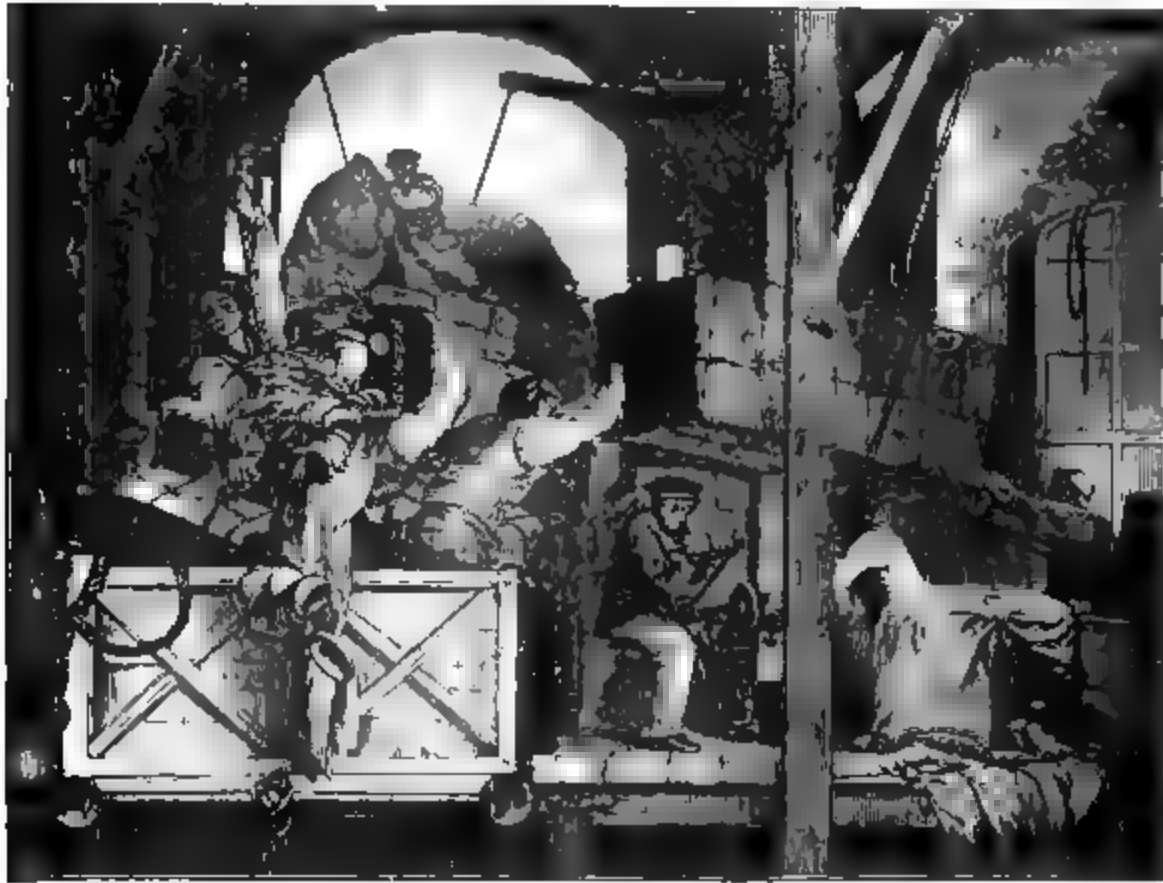
SIR E. BAINES.

holders, unless it reveals some new stroke of policy or contemplates some sweeping reform, take it as a matter of course, for they have ascertained the position of the company from the figures in the report; but the speech is not listened to with such equanimity by the reporters. The best system of shorthand and the

nimblest fingers are put on their mettle in getting the long array of swiftly-spoken figures accurately down in a notebook, and Mr. Price and Sir Matthew Thompson, who were both quick, unhesitating speakers, while apparently only chatting pleasantly to the shareholders about hundreds of thousands and millions, have made many a reporter's temples throb. Indeed, the task to some pressmen during Sir Matthew Thompson's time was so great that he made it a practice to let them have access to his speech after the meeting; and it was no unusual thing to see a dozen pressmen—when the gathering was over and the shareholders were speeding back to business again—swiftly at work

in one of the offices of the company, making copies of the chairman's manuscript.

There have been exciting meetings of shareholders at Derby, and not the least stormy one was that in



CHANGING FROM BROAD TO NARROW GAUGE AT GLOUCESTER (P. 189).

1874, heralding the abolition of the second-class passenger; but to-day the report prompts few questions. Some old familiar figures and voices are missing from the meeting. One notes the absence of the earnest, sincere speeches of Sir Edward Baines and Mr. Michael Thomas Bass. Even Mr. Hadley, from Birmingham, with his old-fashioned, Quaker-like attire, and high, querulous voice that strangely belied his sly humour and the incessant amusement he derived from criticising

the policy of the board, is not in his accustomed place to tackle the chairman with persistent inquiries as to fractions of passenger receipts per train mile, or the cost per hundredweight of train grease.

Perhaps half a dozen easily-answered questions are put on the report, and it is adopted. A vacancy on the directorate is filled up, and the meeting is then made special, sanction being given at it without demur to the raising of additional capital, or the construction of a new line; and, after a vote of thanks to the chairman, everybody departs without misgiving, for the Midland, whether hampered by drivers' strike or determined upon surprising reform, has the capacity of inspiring confidence, and seems unlikely to falsify the opinion formed of it by Mr. John Ellis, who said: "Ours is a sort of family affair. We know, if we put our money into it, we can have it out again when we want it."

The youth of the North Midland was, though it started so bravely, one of struggle. The line, running through rich fields of iron and coal, soon obtained a substantial mineral traffic, and its passenger custom steadily grew; but additional plant and increased station accommodation were needed so urgently that it became absolutely necessary to raise further capital; and to add to the revenue of the company extraordinary economies were recommended, and in some cases carried out. These economies, which included reductions in payment to directors and to the humblest flagmen on the line, were at least impartial, and it was estimated

that they would result in a saving of £13,000 a year. A proposal made at the August meeting in 1841 that the proprietors should be permitted to travel free to the meetings of the company was rejected by a large majority; but in 1846 it was decided that they should be granted this privilege on showing the statement of accounts. Five years later some of the shareholders were discovered abusing this concession, many small stock-holders obtaining tickets without attending the meeting. Consequently a resolution, which now appears on the modest notice convening the meeting, was adopted, setting forth that "no proprietor holding less than £100 in stock, or shares to that amount, is entitled to travel to and from the meeting free of charge."

The North Midland, even in the early part of 1842, reported an increase in revenue, although "unexampled distress still pervaded the commercial world." The company, in their striving, were, for a little while, thankful for small mercies. Their time-table in this year took the form of a little double card, and indicated that the number of trains, passenger and mineral, running during the twenty-four hours between Leeds and Derby was twenty-six; still this was a better record than the London and Birmingham Railway could give, for on their line only twenty-four trains ran in the twenty-four hours.

Prosperity lagged, however. The expenditure trod, in spite of economy, on the heels of income. In the second half-year the dividend was only at the rate of

2 per cent. The shareholders were dissatisfied, some saying that the coal traffic was a burden instead of a profit, and others that the directors, while professing to economise, had erected refreshment and waiting-rooms more like palaces and drawing-rooms than places of comfortable accommodation.

The directors resigned and a new board was appointed. The latter soon began to use the broom. It sought to sweep away what it considered obstacles to financial progress, and decided that there were too many engine-drivers and firemen on the line. The efforts to get rid of a number of these indispensable servants was disastrous. The men objected to any reduction in their number, and they were superseded; but the traffic was disorganised, and passengers soon discovered that railway travelling was a perilous adventure. Scarcely a day passed without a breakdown. There were no fewer than six during the first week of January, 1843, chiefly owing to the freaks of new drivers; and some of these accidents were so serious that people, notwithstanding clever argument to the contrary, were inclined to the belief that it was much safer to stay at home than travel by rail.

The North Midland struggled onward in the path of reform, but the struggle was only a temporary one, inasmuch as the railway soon lost its individuality. In 1844 it was merged, with the Birmingham and Derby and the Midland Counties, into the Midland Railway Company, the first meeting of the united undertaking

being held in Derby on the 16th of July in that year. Meanwhile a line had been constructed from Birmingham to Gloucester, and another from Gloucester to Bristol, and in 1845, when the amalgamation of these tracks was proposed, much perplexity arose from the difference in the width of the gauge. The question to be answered was—Should the narrow gauge be carried right through from Birmingham to Bristol, or the broad gauge laid down from Bristol to Birmingham?

The inconvenience at Gloucester, where the break in the gauge occurred, was exasperating. The delay and expense in changing the goods traffic from the narrow to the broad way aroused the anger of traders. The Great Western, the champions of the broad gauge, were eager to get to Birmingham; and the Midland Railway Company, which had adopted the narrow gauge, longed to run into Bristol. What has been termed “the battle of the gauges” followed. The fight was determined and decisive, and the Midland, acting on the old Dutch merchant’s motto in business, “Terms net cash,” won.

CHAPTER X.

THE "RAILWAY KING" AND HIS DETHRONEMENT.

The English "Railway King"—A Stockbroker's Office—Queer Shareholders—A Butler's Good-Fortune—"Jeames" and his Wealth—Tempting Dividends—Hopes and Fears in the Railway Mania—Absurd Projects—The Greed of Gold and the Disaster it Brought—George Hudson's Climb to Fame—An Election and a Quick Train Ride—Hero-Worship—Rumour, Distrust, Caricature, and Law—Downfall of the Monarch of the Line—His Life on the Continent—Clinging to the Memory of Greatness—Poverty and Death.

GEORGE HUDSON liked responsibility. He discovered that it led, sooner than toil, to wealth; and in his strange career he carried a good deal of it on his shoulders. He was the most conspicuous figure in the railway mania. The time had long gone by when people had little faith in railways, and the refusal of a London firm of the solicitorship of the Brighton line because the coaches would drive the trains off the road in a month had become a tradition. Everybody, with money and without money, went mad about railways.

Transactions in railway stock were characterised by swift physical movement as well as by reckless mental haste. There was no ring of the telephone bell; no whisper along the wire from the office papered with share-lists and sprinkled with ledgers to the broker on 'Change; no suave, glib-tongued man, confidentially talking to you about the latest phases of the market

—how Home Railways are firm, with a rise of $\frac{1}{4}$ to $\frac{1}{2}$ in North-Western, Midland, and Great Western; that Brighton Deferred are worth buying on a slight rally, but Scotch descriptions are down: how the small dividend has injuriously affected Grand Trunks, that Mexicans are quiet, that De Beers have risen, while there has been a decided inquiry for Uruguays and Milwaukeees. But none the less the country was in a high fever of railway speculation. The sharebroker's office was crowded with eager, sometimes frantic, buyers and sellers. Messengers rushed to and fro, dusty and perspiring, little dreaming that their work would soon, to a great extent, be superseded by science. Nearly everyone bought scrip, sold it, and speculated again in a whirl of rashness and excitement. The nobleman and the beggar, the church dignitary and the verger, the judge and the lawyer's clerk, the cotton-spinner and the factory hand, persons of the highest social position and folk in the humblest paths of life, weary with the drudgery of toil, bought shares. They clamoured for quotations, demanded allotments, and struggled with a gambler's greed for a gambler's reward. It was stated by Lord Clanricarde in the House of Lords in 1845 that Charles Guernsey, a charwoman's son, engaged as a clerk in a broker's office at twelve shillings per week, had his name down as a subscriber for shares in the London and York line for £52,000.

Thackeray burlesqued this fortunate speculator in his "Diary of C. Jeames De La Pluche, Esq.," who,

after "a little blushing and hesitation," told his master, Sir George Flimsy, a banker in the City, "that he was anxious to retire, and to invest his savings to advantage



DEPOSIT OF RAILWAY PLANS WITH THE BOARD OF TRADE IN 1845.

—that he had been speculating in railways, and had won £30,000!" Every reader and every theatre-goer knows what a splendid creature Jeames became, and what diversion he afforded to "that sly wagg, Cinqbars," and to other members of the aristocracy,

who laughed at him while they borrowed his money. Jeames, whom vanity and flattery converted into a fool, nevertheless gives a vivid picture of the money-grabbing eagerness of the time: "Railway spec.," he says, "is going on phamusly. You should see how polite they har at my bankers now—Sir Paul Pump Aldgate & Company. They bow me out of the back-parlour as if I was a Nybobb. Everybody says I'm worth half a millium. The number of lines they're putting me on is inkumseavable. I've put Fitzwarren, my man, upon several. Reginald Fitzwarren, Esquire, looks splendid in a perspectus; and the raskle owns that he has made two thowsnd. How the ladies and the men, too, foller and flatter me! If I go into Lady Binsis hopra-box she makes room for me whoever is there, and cries out, 'O! do make room for that dear creature.' And she complyments me on my taste in musick, or on my new broom-'oss, or the phansy of my weskit, and always ends by asking me for some shares."

The mania began with a pardonable desire for good investments. Money was cheap, and yielding little interest, except in railways. The age of limited companies had not arrived; there were not a thousand channels down which savings could flow to quicksand and sometimes to prosperity. People who had been at their wits' end for a safe investment noted that the railways were making steady progress in public favour, carrying more and more passengers and goods, and declaring in the then state of

the money market almost remarkable dividends. The Liverpool and Manchester Railway paid 10 per cent.; the London and Birmingham paid 10 per cent.; the North Midland paid 10 per cent.; the Stockton and Darlington, over which George Stephenson had jolted with suspense and anxiety, had become a line of considerable mark, and paid no less than 15 per cent. The impression strengthened that a railway was the most secure and profitable undertaking in the country, and everybody longed for certificates and a big dividend. So intense was the longing that even the shrewdest forgot their caution. They were ready to buy any number of shares in any number of lines.

In 1836 the people had been smitten with the railway fever, and railways became "a fashion and a frenzy." The locomotive, though it sounds a large morsel, was in everybody's mouth. It even aroused the sluggish curiosity of the farm labourer, and perhaps gave him the first prompting about the busy, industrial, commercial world beyond his own quiet village—inculcated in him a desire to try his fortune in the crush of some great city, and was probably the beginning of that huge influx of rural population into our great centres of industry that is just now proving a difficult problem to statesmen. Anyhow, the clergy of Hampshire had a particular grudge against the locomotive. They petitioned against it because their parishioners stayed away from church to see the train pass—possibly they felt some disquiet about the temporal as well as the spiritual future of their rustic flocks, and feared that their next freak would

be a scamper away in the train itself, a desertion of the homestead and of field labour for the city workshop and the crowded street. But the interest in the locomotive was not limited to mere curiosity. People risked their money on it. Indeed, everything connected with railways obtained the readiest support.

The most absurd project that ever emanated from a madman's brain would during this memorable year have found credulous investors. It is difficult, in fact, to believe that some of the promoters were not insane. In Durham, for instance, three railways, all running in parallel lines, not far apart, were projected. At Greenwich speculators were eager to tunnel the park, and lest the vandalism should arouse indignation, proposed to erect marble arches adorned with marble busts. One inventor, confident that wind was a better motive-power than steam, endeavoured to propel his engine by means of sails; another was certain that by the aid of rockets he could drive a locomotive at the rate of 100 miles an hour; and one of the most whimsical railways announced was a tiny line warranted to carry invalids with safety to bed.

The speculation in sound lines and in flimsy projects expanded enormously. Fortunes were made and lost, and avarice and knavery worked much mischief. Even some of the most substantial railways were hard hit during the financial panic that followed the tussle for gain, and the cheques of the Great Western were actually returned. Many a bank-manager's face was seamed with care, many a merchant on the verge of

bankruptcy, and many an artisan and operative idle. The industry of the country was disorganised, and it is quite impossible to gauge the sum total of distress and privation that formed the sad sequel to this rash outburst of speculation.

But the mania of 1836 was, after all, trifling compared with the fiercer and more prolonged mania of 1845-6. Railway scrip seemed to be only another name for gold. Many a man who, a few months previously, was engaged in a bitter struggle with poverty, had a solid balance at his bankers; many a woman whose extravagance had brought herself and her dressmaker to the verge of ruin found in the stock-market an apparently inexhaustible supply of pin-money. In the scramble for gold, commercial morality became lax. Not only did a race of "bulls" and "bears" and seedy "stags" without conscience spring into being, but men hitherto honest tolerated swindling. There were repeated warnings as to what the end would be, but nobody heeded the writing on the wall; no one took notice of the hint that railway property was liable to great depreciation from unnecessary competing lines. Shareholders, intent on making a fortune in half a day, brushed past George Stephenson, in his old-fashioned apparel, with a large bunch of seals dangling at his fob, and thought he was a fool because he preferred to hold his shares, and had no desire to speculate.

The number of projects was enormous. Lines were, on paper, duplicated everywhere, or carried into

the remotest localities. One was advocated because it passed through a county "celebrated for its genial climate," another because it ran across ground that had been invaded by the Danes; and the London and Exeter was actually thrust upon the market on



GEORGE HUDSON.

(After the Portrait by Francis Grant, A.R.A.)

the plea that it ran along the road used by the Romans. It is estimated that £100,000 per week was spent in railway advertisements alone.

In "Annals of Our Time," it is recorded, under date August 2, 1845:

"Such is the desperate eagerness for gambling in shares at Leeds, that the police have to be employed to keep the streets clear leading to the Stock Exchange. The chairman, at a meeting of

stockbrokers called for the purpose, referred to the alarming spirit of reckless speculation now going on, and warned them of the disastrous consequences. It was said to be not an uncommon thing for 100,000 railway shares to be sold in one day in Leeds."

The race, pell-mell, to town to get the plans deposited in time was a most exciting one. It was accomplished amid the cursing and fighting of rivals. Horses were driven till they tottered, coaches were upset, post-boys thrashed, nearly every sort of conveyance available utilised; and it is said that the plans of one competing line were sent, accompanied by the clerks, in an undertaker's hearse to London. More success than was anticipated fell to the lot of many of these railway Bills, for in the sessions of 1844-5-6 no fewer than 440 were passed, authorising the construction of 8,470 miles of railway and the raising of new capital to the amount of £180,138,901.

In the midst of this whirl of railway speculation George Hudson moved unweariedly—cool, resolute, almost Titanic. A yeoman's son, he was apprenticed to a linendraper at York, and served behind the counter as servant and master until his opportunity to grasp fame arrived. In 1832 he gained some notice as a member of the city Board of Health, and in 1837 he became Lord Mayor of York. The man had considerable business capacity and an abundance of perseverance, and he realised early the importance of getting the railway to York. He withstood opposition and sneer unflinchingly, and in the year of his Lord Mayoralty, when he had gained the friendship of George Stephenson

and become known as a sturdy pioneer of railways, he had the satisfaction of seeing the York and North-Midland Bill pass, and the additional satisfaction on May 30, 1839, of taking a prominent part in the opening of the line.

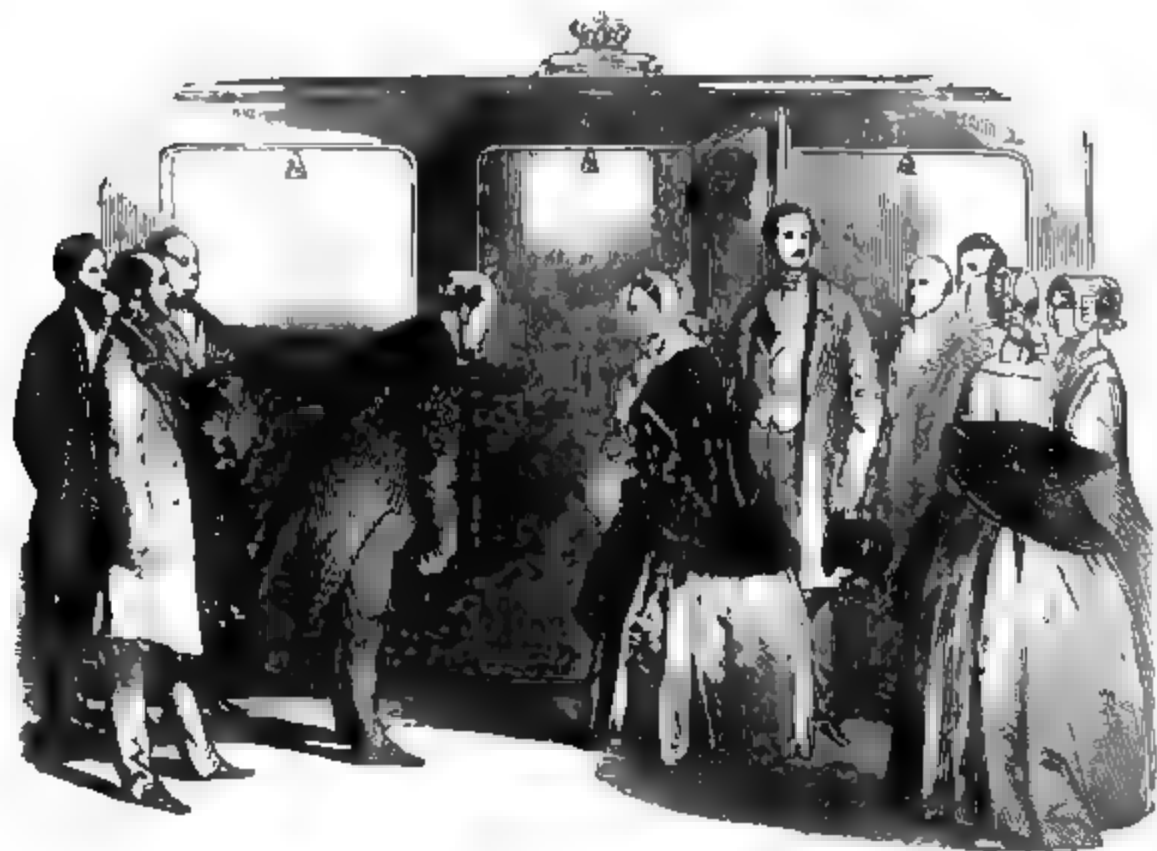
Henceforth his energy was focussed on railways. He projected a line to Scarborough; he leased, with the consent of his colleagues, the Leeds and Selby Railway; he leased the Hull and Selby track; he practically initiated the Newcastle and Darlington line, giving an eastern route to Edinburgh; he thwarted the Manchester and Leeds Railway Company in their effort to get into the East Riding by his princely purchase of Londesborough from the Duke of Devonshire: he controlled more than a thousand miles of railway. Not even his foolish policy of paying dividend out of capital, when chairman of the Eastern Counties Railway, shook the confidence of the crowd in him. The strange freak was thought of comparatively little account in view of his general shrewdness and magnificent prosperity. There was no limit to the hero-worship of this railway magnate and brilliant money-maker. The Prince Consort desired an introduction to him; Sir Robert Peel's fame was second to that of the linendraper of York. The people cheered him wherever he went; for George Hudson, implacable and merciless to a railway opponent, to anything in the shape of a rival line, and stubborn and resistless, some said unscrupulous, in buying and selling, was kindly to those

in distress, and brightened many a poor man's home with his splendid generosity.

This slovenly-attired man, "with his harsh-looking face, bordered with grey scanty hair and lit with keen grey eyes, with his quick but thick utterance and brusque, imperious manner, with his large, heavy frame and peculiar almost shuffling walk," had the railway world at his feet. His signature swayed its speculation; his word was so powerful in Committee that in two days he obtained sanction to forty Bills, authorising the expenditure of £10,000,000. Adulation and honours were heaped upon him. He was thrice Lord Mayor of York, and in 1845 Sunderland returned him to Parliament.

"I availed myself of this election," said Sir James Allport to Mr. Frederick S. Williams, "to see what could be done in the way of travelling on a narrow-gauge line. I determined to take the result of the election to London, get it printed in *The Times*, and return to Sunderland with the newspaper. The election was over at four o'clock in the afternoon, and by five o'clock the returns of the voting for every half-hour during the poll were collected from the different booths, and copies were handed to me. I had ordered a series of trains to be in readiness for the journey, and I at once started from Sunderland to York. Another train was in waiting at York to take me to Normanton, and others in their turn to Derby, to Rugby, to Wolverton, and Euston. Thence I drove to *The Times* office, and handed my manuscript to Mr. Delane, who, according

to an arrangement I had previously made with him, had it immediately set up in type, a leader written, both inserted, and a lot of impressions taken. Two hours were thus spent in London, and then I set off on my return journey, and arrived in Sunderland next morning

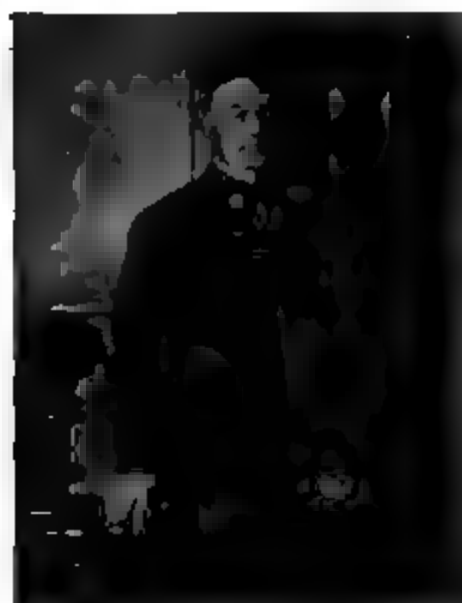


THE "RAILWAY KING" ATTENDING THE QUEEN INTO A CARRIAGE.

at about ten o'clock, before the announcement of the poll. I there handed over copies I had brought with me of that day's *Times*, containing the returns of what happened in Sunderland the previous afternoon. Between five o'clock in the evening and ten in the morning I had travelled six hundred miles, besides spending two hours in London—a clear run of forty miles an hour."

Sir William Fraser, in his book "Disraeli and His

Day," tells the following story of Bernal Osborne and George Hudson, which certainly points to a remarkable freedom of debate. "In one of the first speeches that I heard of Bernal Osborne, George Hudson, the 'Railway King,' attracted his attention by some inarticulate



BERNAL OSBORNE.

(From a Photo by Lombard & Co., Ltd.,
Pall Mall East, S.W.)

sounds, expressive of doubts of the fact uttered by the orator. It was about six p.m.: turning upon Hudson, he said—"I must beg the member for Sunderland not to interrupt me; at this *early* period of the evening he has no excuse for making a noise." This, of course, did not diminish the wrath of Hudson, who sprang to his feet and endeavoured to address the

House. Bernal Osborne, however, continued—"Sit down, pray! I accept your apology. Say no more!"

Then, as now, a fierce and embarrassing light was sometimes focussed on a Member of Parliament. Hudson had not sat long in the House before there were whispers about his integrity. Then he was openly and boldly attacked. At a meeting of the Midland Railway Company in July, 1846, when a proposal to lease the Leeds and Bradford Railway was considered, he could no longer let the sinister hints and the daring accusations remain unchallenged, and he said: "I must give a broad denial to the assertion that I have purchased or sold a


single share since this line came under consideration. It has been my good or bad fortune to be the purchaser of many railways; and I might frequently have taken advantage of my position and knowledge to go into the market and lay out large sums with great benefit to myself; but I here publicly declare that I have not done so, and I call upon any person who can prove anything to the contrary to come forward and do it at once." His utterance was applauded; but the doubt as to his sincerity extended. The doubt grew into conviction, and he was mercilessly assailed. Caricature found him a choice subject for its art and satire. He was sketched sitting in his linendraper's shop, and then at the tunnel's mouth, where he learned "how a great deal of the railway business may be kept in the dark." He was pictured speaking in public amid loud and continuous cheering; squeezing the hand of the aristocracy, hobnobbing with the Iron Duke, and showing the Queen how to manage a train. Then he was depicted as a spider in the centre of an immense web, working an extraordinary number of lines—railway lines—along which the shareholders, in the shape of flies, were crawling to their ruin; then shaken by the collar by those whom scrip had deluded; and finally deserted—alone on a station platform, frantically waving his hat and shouting in vain for the train that was speeding away, unheeding his cries, and leaving him stranded.

Caricature as applied to George Hudson told a good deal of truth: its prophecies in pen and ink were in the main fulfilled. The man lost influence, fame, and

fortune as quickly as though he had toyed with the dice-box and staked everything he possessed on a single throw. The rumours and murmurs crystallised into direct charges at a railway meeting at York, and his replies were so unsatisfactory that some of his hitherto devoted worshippers denounced him. Later, a Yorkshire newspaper said that he was guilty of impudent fraud and that he had ruined many of those who had followed his financial cue. Indignant, and full of concern for the shreds even of his former reputation, he sought to pillory the journal by an action for libel ; but the jury did not consider the article complained of libellous, and returned a verdict for the defendant, his counsel appealing to them in these stirring words : “ Is it true that the laws are like cobwebs, through which great flies escape and only little flies are caught ? Is it true that a poor wretch who has stolen a loaf to meet the cravings of the moment is to be branded with infamy ? And is it true that he who has ruined thousands is still to ride up and down the streets of his native city, and in the parks of London, in his carriage surrounded by splendour ? ” What really dethroned him was the judgment given in the Rolls Court in the action brought by the York and Midland Railway in the early part of 1853. It set forth that this man, upon whom the impecunious had fawned and whom the rich and great had esteemed it honour to know, “ must account for all the shares appropriated by him, as well as for those alleged to have been presented to persons of influence in Parliament to facilitate the passing of the company’s

Bill." Sunderland proved loyal to her member in face of reviling till the storm burst; but the man whom Carlyle called "a big swollen gambler," stripped of his honours and reputation, had no alternative but to go into obscurity.

It has been said that he was harshly judged. One writer asserts that he was "neither better nor worse than the morality of 1845; that he was elevated into the dictatorship of railway speculation in an unwholesome ferment of popular cupidity pervading all ranks and conditions of men; and that whatever may be the hue of the error he committed, it is rather too much to expect of him that he should be purer than his time or his associates." Such a contention, though meant in the kindest spirit, snatches away the partition between right and wrong; and it must occur to those who desire least to asperse his memory that George Hudson, being the "dictator of railway speculation," and holding the happiness or misery of many in his grasp, should have been so scrupulous, so jealous of his commercial rectitude, that slander would have attacked him in vain. Whatever his faults, they did not weigh him down with remorse. His faith in his own motives was never shaken; and on the Continent, where he plunged with untiring energy into new but seldom successful schemes, he kept a tolerably light heart, and delighted to speak of his former greatness, of the business and social whirl in which he lived when everyone from courtier to beggar was burning with the lust of gold. "Sydney Smith, sir, the Rev. Sydney



Smith, the great wit, first called me the 'Railway King;' and I remember very well that he made a very pretty speech about it, saying that while some monarchs had won their title to fame by bloodshed and by the misery they inflicted on their fellow-creatures, I had come to my throne by my own peaceful exertions and by a course of probity and enterprise."

Such stories as this he told to the curious acquaintances he gossiped with in cafés and on the sunny side of boulevards; and though he had become only a shadowy counterfeit of the pompous, brusque railway dictator, he aped his old manner, and tried to make strangers believe that he cut a considerable figure in the world still. But he had lost the opportunity or the knack of making money. This man, who once "held the key to untold treasures," sank into poverty; and one story bluntly says that he frequently went hungry to bed. Generous help was given to him by former friends, however, and his closing days were not embittered by neglect or privation. He died in London on December 14, 1871, clinging to the last to the memory of his old prosperity, and finding, like Captain Gann in Thackeray's "Adventures of Philip," some melancholy solace in the recollection of his former greatness.

*Wm. Park from my trust
Sept. 15-1875 Geo. Hudson*

FAC-SIMILE OF HUDSON'S AUTOGRAPH.

CHAPTER XI.

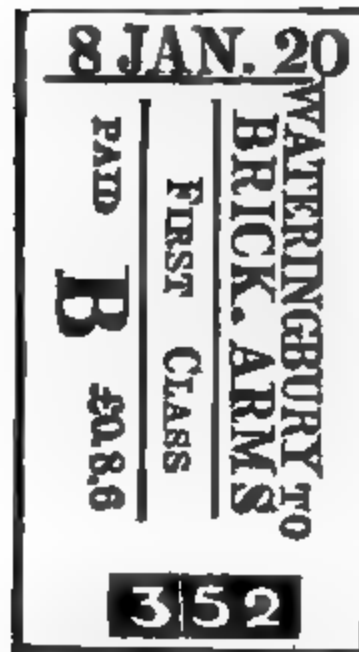
THE YOUTHFUL STRUGGLES OF THE MIDLAND—BIRTH OF THE EXCURSION SYSTEM.

Railway Beginnings in Leicestershire—The Voice of the Steam Whistle—Metal Railway Tickets—The Old and the New Ticket-Collector—The High Peak Line—Dawn of the Excursion Era—The Tripper and What he Can Do in a Day—Thomas Cook's First Excursion Train—The Advent of the Great Northern—The Two Georges—Some of Stephenson's Characteristics—Dark Days for the Midland—The Great Exhibition—Fierce Competition—To London and Back for Five Shillings—Stagnation of Other Traffic—Seizing an Enemy's Locomotive—An Invulnerable Train.

RICHARD GREEN, in his book "The Making of England," thinks this great work of making a nation was started somewhere near Dore, in East Derbyshire; but it is possible that the real practical start was made in Leicestershire. However this may be, the Leicester and Swannington Railway, though it only ran by shale-hillock and pit head-gear, and by miners' humble dwellings, undoubtedly contributed to "the making of England," if it did not actually begin the gigantic task. The line was the cradle of much railway progress, notwithstanding the fact that some of the shareholders were bad payers, and had to be told that unless they met their calls promptly "their names would be furnished to one of the principal and most pressing creditors of the company."

Swannington, as the first railway constructed in the Midlands, may, without much romancing, claim to be the pioneer of three useful things—the steam whistle,

the railway ticket, and the excursion train. It is needless to say much about the steam whistle, seeing that it has powerful lungs and can speak for itself. It does speak, with piercing voice, on entering and emerging from a tunnel. It shrieks its warning in cutting and on viaduct; and all through the night, in the goods sidings of some great city, it cannot hold its peace, and



A TICKET OF 1845.

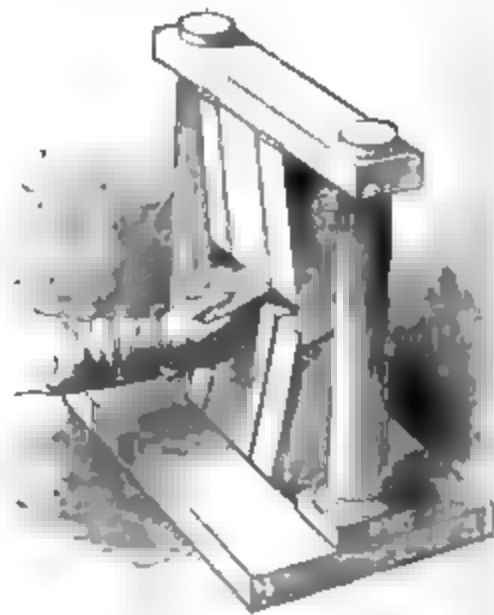
gossips in loud, blatant tones with other steam whistles, that fret and fume, and yell and wail, making midnight hideous and sleep impossible, because they are fitted on engines doomed to shunting. No invention has been so liberally blamed and cursed. It has startled the tired child in its slumber, and made it instinctively nestle closer to its mother's breast; it has made the business man, with his system highly strung with trade fight

and his brain racked with a hundred cares, toss in despair on his hot, crumpled pillow, trying in vain to sleep; and it has made the drunken roysterer, lurching homeward in the half-light between darkness and dawn, stop suddenly in his erratic walk, and whisper to himself, "What's that?"—his face indicating meanwhile that he fears Nemesis is at his heels. The steam whistle, though often considered a nuisance, and sometimes in its wild, uncontrolled exuberance, a torture, does valuable work. It is an effective, if

startling, herald of danger, and by timely warning has saved many lives.

The modern passenger-ticket of rough cardboard, plain or parti-coloured, with its number in big type, and its smudgy-stamped date, is not a graceful production, though its conditions impress you; and if it is a combined railway and sea-going ticket it sometimes makes you uncomfortable, setting forth as it does that the company "will incur no liability in respect of any loss that may be sustained by the passenger caused by perils of the sea or weather;" but it is a neat and handy work of art compared with the early railway ticket—such, for instance, as that used on the Swannington track. The company for some time only possessed one passenger-carriage, which was, when required, attached to one or other of the coal trains that ran to Leicester, and the ticket issued was of metal, about the size of half-a-crown, but octagonal in shape. (*See tailpiece on p. 225.*)


The type of ticket-collector now familiar on every platform, with his agile feet, his swinging leap from carriage-step, his voice sometimes sharp, sometimes musical as the "ping-ping" of the machine that punches the ticket, and now and then stern, as he tells you to



DATE-PRINTING MACHINE FOR
TICKETS IN 1845.

summat short" for the old folks—is often viewed with contempt, as he shouts and struggles in the crowded station, and tries to squeeze all his brood into the nearest compartment, fearful lest, after all the self-denial and preparation, and sitting up half the night to be in time, he may be left on the platform with a group of sobbing little ones, with faces mapped out in whimsical geographical lines drawn by dust and dirt and tears, and hearts heavy because they have missed a chance of seeing the sea, or of roaming about the lovely vale in the depth of which stands the pretty cottage, with its humble advertisement, "Hot water for tea," peeping out of the trailing honeysuckle over the doorway. But he does not deserve all the ridicule he gets. The man is only taking recreation after his fashion, according to his habit of life and opportunity, however uncouth his ways may appear to the *dilettante* traveller, who is not quite free from the Pharisee's feeling, as he daintily steps into his cosy compartment of the express with a first-class ticket, to-day's *Times*, the last new novel, a rich plaid shawl to keep the draught from his knees, a case bulky with choice cigars, and the prospect of a luncheon or table-d'hôte in the dining-car.

The tripper, whose type is legion, indulges, it must be admitted, in erratic conduct; but, in many instances, travel has broadened his mind and somewhat refined him. He is less eager to drink spirituous liquors neat, to fight, to rip cushions, to wreck carriages, and to climb on the engine to show the driver how things



ought to be done. His eccentricities, though perhaps not always free from vulgarity, are less violent. They spring not so much from vicious propensity as from exuberance at freedom from toil. The tripper is seldom still: he seems to have adopted the modern method of curing consumption, for he is ever singing, shouting, laughing, or going through marvellous gymnastic exercises. Not the least remarkable feature of his character is his magnificent endurance. He thinks it no great feat to go on a day-trip from Manchester to Douglas, or from Liverpool to Edinburgh. He will travel from Leeds to London in the night, race to every show-place in town from Westminster to the Tower, run down by boat to Greenwich, spend the evening at the Gaiety or the Empire, rush to Euston, King's Cross, or St. Pancras, ride home again in the night, and go to work the next morning, thoroughly satisfied with his "Day Excursion to London." After all, it is easy to forgive the tripper's caprices when one thinks of the benefits the excursion-train has conferred on the community. It has done a fairy's work, not by the waving of a wand, but with a puff of steam. It may have given opportunity to folly, but it is doing good work for civilisation in taking thousands of workers from the crowded city to the sea-shore and country-side.

Parliament was tardy in insisting on the daily running of trains at a cheap rate—at fares not exceeding one penny per mile. But Thomas Cook* made the

* The Founder of the Excursion System died on July 19, 1892, aged 84.

experiment, and took 570 passengers from Loughborough to Leicester, and back again, for one shilling each — at the rate of one halfpenny per mile. The trip was a novelty, and it aroused much interest. In a work which describes the rise and progress of the firm this Derbyshire lad founded, it is stated: “When the first excursion train carried its 570 passengers from Leicester to Loughborough, no doubt existed in the minds of the passengers or of the spectators that the event was exceptional or extraordinary. Not one of them had thought it possible to organise a trip on such a scale. The passengers were treated as conquering heroes. A band of music preceded them on their way to the railway station at Leicester. On reaching Loughborough they were made to feel their importance as pioneers, the inhabitants of the town congregating at the railway station to greet them. The return journey was not less memorable. When the excursion train reached Leicester, at half-past ten o’clock at night, the passengers were welcomed home by a vast concourse of their fellows, and they were treated as persons who had performed a notable feat.”* The directions given in these early days of excursion-traffic, which has now grown to such enormous proportions, were almost paternal; the following notice being

* Mr. Clement Stretton has recently sent the author the following interesting particulars with respect to Thomas Cook’s train: “It was drawn by two Bury engines and tenders, and consisted of fourteen open third-class carriages containing forty persons each, and one first-class carriage reserved for Mr. Cook and his friends. The first-class coach was decorated with a flag at each corner; there were also two flags at the back of the second tender. The guard rode on the top of the covered coach.”

issued with regard to a trip from Leicester to Liverpool in 1845: "The train will leave Leicester at five o'clock in the morning of Monday, August 4, reaching Syston at ten minutes past five; Sileby twenty minutes past five; Loughborough half-past five; Kegworth a quarter before six; arriving at Derby at ten minutes past six. A train will leave Nottingham at half-past five, uniting with the Leicester train at Derby. Parties will have to be *wide awake* at an early hour, or they will be disappointed. Promptitude on the part of the railway company calls for the same from passengers."*

The Midland Company, chiefly to keep a rival out of the market, purchased the Leicester and Swannington Railway, and abolished its old steep self-acting incline. In 1847 the company practically opened the new line through the Erewash Valley and got into the heart of a rich coalfield. Meanwhile the directors were busy with other projects, and one of these, a contemplated line from Syston, near Leicester, to Peterborough, yielded some excitement to the surveyors. Stamford, paying nearly two pounds per ton for its coal, hailed the project with enthusiasm, for it was weary of giving famine prices for fuel; but Lord Harborough cherished the good old prejudice against railways, and his lordship's adherents and the men of the theodolite clashed physically. This encounter was afterwards dignified by the title "The Battle of Saxby Bridge." One of the

* "The Business of Travel: A Fifty Years' Record of Progress," by W. Fraser Rae.

surveyors, hampered in his chain-work by a keeper, drew a pistol and threatened bloodshed. "Shoot away!" said the keeper menacingly; and the struggle that followed, though not deadly, was sufficiently serious to give one or two of the surveyors a little experience of life in prison.

The company were not allowed to buy up old lines and make extensions without determined opposition; and the directors, while striving to carry their system further north and south, had the mortification of seeing another line projected from London to York—a line that intended to fight for their traffic at every step. The promoters of the new track did not ignore



THOMAS COOK.

(From a Photo by J. Burton & Sons, Leicester.)

George Hudson's axiom, "A railway should bend to the populations, and not leave the towns." But the "Railway King" did not care to have his own theory put into practice by an opposition undertaking, and he waxed wroth about the project, characterising the whole scheme as a piece of humbug, boasting that the London and Birmingham and Midland could easily beat any train on the new route in a run from London to York, and doubting whether passengers venturing in a train of

the new line, in foggy weather, would ever reach York at all.

The fight in Committee was a tough one. Twenty counsel not only aired their eloquence, but spoke for days with vigour inexhaustible. It was stated by Lord Brougham that George Hudson had determined the Bill should be talked out, and that he had retained no fewer than twelve counsel for the Midland Company alone. The "Railway King" asserted that his lordship's statement was inaccurate, and that the company had only five counsel to protect their interests. Anyhow, there was no lack of acrimony, and there was a vast amount of talk. The walls of the Committee-room were covered with plans. The members of the Committee were half hidden by notes and memoranda. At the barristers' table there was the continual shuffle and crackle of briefs and tracings, and now and then the thud of a law-book aggressively asserting its individuality. Amid this pyramid of legal and railway literature a score of counsel pushed their elbows, or fumbled with their hands in search of authorities, or tried to bewilder or convince the Committee with torrents of words. Near, bustling with importance, moved a crowd of attorneys and their clerks; not far away a group of witnesses; beyond the bar an eager throng that the railway Bill had brought to town.

To make the project more acceptable, the Direct Northern and the Cambridge and Lincoln schemes were merged in the proposed London and York Railway; and to strengthen the opposition, the London and North-

Western again appeared as a friend of the Midland. The Committee at last decided that they had heard enough evidence and argument, and declared, amid intense excitement that found expression in loud "hurrahs" and even in language less polite, that the preamble of the Bill, except with regard to the Sheffield and Wakefield branches, was proved—a decision that really meant the birth of the Great Northern Railway.

Defeated in this direction, the Midland Company did not fold their hands in despair. They pushed onward, encouraged by increased receipts from passenger- and goods-traffic, to new projects. As an example of their enterprise, it is worth recording that in 1845 and 1846 it was resolved to obtain a large holding in the proposed line to Matlock, Buxton, and Manchester; to extend the Leicester and Swannington Railway to Burton-on-Trent; to make a line from the latter town to Nuneaton; to construct branches from the Erewash Valley to Chesterfield; to make a line from Nottingham to Mansfield; one from Clay Cross to join the Nottingham and Lincoln branch; another from Swinton to Lincoln to connect the West Riding with Gainsborough and Doncaster; a track to connect the Birmingham and Gloucester line with the docks at Gloucester; a branch from the Birmingham and Gloucester line to Malvern, even then described as a rising watering-place; and, in addition to several other undertakings, to lay a narrow-gauge line down to Bristol, in order, in the words of the chairman, that a passenger might be able to travel from Edinburgh to Bristol without change of carriage.

So numerous were the schemes brought forward that one shareholder became alarmed, and pointing out that they were rendering themselves liable to an expenditure of three or four millions of money, could not help thinking they were overshooting their mark. But events proved otherwise, and the Midland, with a substantial surplus capital and growing traffic, and its ordinary stock yielding a dividend of 7 per cent., made satisfactory progress, not only with most of these undertakings, but by acquiring the Leicester and Bedford line, so getting a more direct route to London, and soothing many an irate passenger who had hitherto scowled and stamped with rage at the delays at Rugby.

The career of the Midland for the next two years was one of remarkable prosperity. The company pushed on with many works, nearly doubled the amount of their rolling-stock, and still maintained their dividend. George Hudson explained, too, with some self-gratification, that the power of the Midland engines had been greatly increased, and that an express had just run to the North with newspapers containing the budget of the year, at the rate of fifty-four miles an hour, a speed which he believed had never been exceeded on the narrow gauge. Nevertheless, confidence in George Hudson, as we have seen, was waning, and there were indications of coming trouble.

At the meeting of 1848, pregnant with whispers of his approaching downfall, it was Hudson's duty to refer to the death of a man whose influence upon railway development and enterprise had been far more

beneficent than his own. George Stephenson, full of years and honours, had died at Tapton House, Chesterfield, and had been laid to rest in Trinity Church in that town.* People were still telling stories about his work and life—how frugal and yet generous, how full of energy and yet systematic, how daring and yet how



TAPTON HOUSE, CHESTERFIELD.

(From a Photograph by A. Seaman & Son, (Chesterfield).)

shrewd he had been; and with what lowly occupation and simple honest pleasures he had brightened the closing years of his life in the prim, red-brick mansion, set in pleasant pastures and skirted by tempting field-paths that led to copse and glade, or by deeply-rutted Crow Lane into the old town in which he was such an honoured and interesting figure.

* George Stephenson died on August 12, 1848, and was buried on August 17.

His distaste of ostentation was recalled by the anecdote of the youth who, anxious to become an engineer, got an introduction to him, but sauntered into his presence languidly balancing a gold-headed cane. "Put by that stick, young man, and then I will speak to you." The story of his rebuff to the fop was repeated: "You will, I hope, excuse me," he said gravely, "I am a plain-spoken person, and am sorry to see a nice-looking and rather clever young man like you disfigured with that fine-patterned waistcoat and all these chains of fang-dangs. If I, sir, had bothered my head with such things when at your age, I should not have been where I am now." Nor did his remark about the cloak of fame lose gist in re-telling: "Why, madam, they used to call me George Stephenson; I am now called George Stephenson, Esq., of Tapton House, Chesterfield. And further, let me say that I have dined with princes, peers, and commoners; with persons of all classes, from the humblest to the highest. I have dined off a red herring when seated in a hedge-bottom, and I have gone through the meanest drudgery. I have seen mankind in all its phases, and the conclusion I have arrived at is this—that if we were all stripped there is not much difference."

The "Railway King," who was about to drop his mantle of greatness, had no doubt come to a similar conclusion; but he concealed any misgiving he might have with regard to his own future; and with a manner as dignified as on the day when he walked into the House of Commons with twelve Bills under his arm,

spoke with admiration of George Stephenson's life, and said : " History will record his name as that of a great and distinguished man."

Soon after this utterance the dissatisfaction at George Hudson's policy and the condition of the accounts of the company became so marked, that on April 19, 1849, a meeting of shareholders was called to appoint a committee of inquiry, and at this meeting the " Railway King," by letter, resigned his position as chairman of the company, and took his first step into obscurity. The investigation did not give shareholders much comfort, especially as the distinction between capital and revenue had not been very finely drawn. Reforms in administration were suggested, and it was decided to seek the co-operation of other companies and to strive for a lighter rating of the company's property. At this time the traffic receipts showed a decrease, principally owing to the competition of the Great Northern Company, which ran to several important towns on the Midland track at equal fares. The early part of the year 1850 was indeed rather a gloomy one for the Midland, and the value of its consolidated stock fell rapidly. In the autumn, however, the prospects of the company were brighter, several new lines having been completed. The Great Northern still made a determined raid on the passenger traffic; but the goods receipts showed a large increase, and the directors were enabled to pay a more satisfactory dividend.

Nor was 1851 an unexciting time for the company.

They acquired the Leeds and Bradford Railway, after some opposition from within, one of the shareholders holding that the line had been "concocted in iniquity;" and they fought the Great Northern Company for the excursion traffic to the Great Exhibition. The Exhibition, which has become in the English mind a tradition of all that was vast and beautiful, attracted everybody to town. The competition for every passenger from the North was very keen, the Midland and the Great Northern running their trains at singularly low rates. Thomas Cook ran an excursion from Leicester to London and back for fifteen shillings each passenger; but the Great Northern did the journey much cheaper.

The Midland Company, determined not to be outdone by its rival, went lower still, and carried passengers from Bradford and Leeds to London and back for five shillings each. "It was," writes Mr. J. M. Cook, describing the scene on the Midland, "a time of intense excitement, and all the trains on the line, except the day express, were made available for excursion tickets. Frequently the night mail would be run in from two to six divisions. At the call of a band of music I saw workpeople come out of factories in Bradford, pay five shillings for a ticket, and with a very few shillings in their pockets, start off on Saturday night to spend Sunday and Monday in London, returning to work on Tuesday morning. The people of Yorkshire were thus educated to travel, and my returns at the end of the season showed that a hundred and

sixty-five thousand had taken the excursion tickets. It was a lively time from March to November, and I closed my season engagement by taking from Derby, Nottingham, and Leicester three thousand Sunday-school children to see the Exhibition."

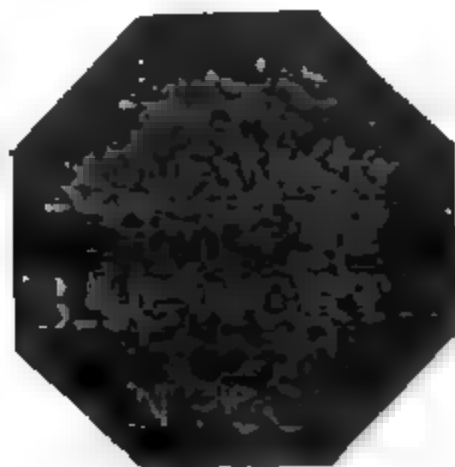
The general determination to visit the Exhibition diverted traffic to an amazing extent, and on other parts of the Midland system the passenger receipts fell rapidly, one of the most notable decreases being on the Birmingham and Gloucester route. The chairman, Mr. John Ellis, was apparently a little downcast at the remarkable way in which the rush to the Exhibition had affected the traffic of the company in other quarters, and bewailed the fact, saying: "There has been nobody going to Cheltenham this year; scarcely anybody to Scarborough; and the little Matlock line has experienced a decline in its receipts this year amounting to 20 per cent."

The competition with the Great Northern was continued. The Midland defended its own traffic with untiring resource. The Great Northern made many attempts to grasp its rival's trade. Now one company, then the other, obtained an advantage. In the struggle much bitterness was generated on both sides, and the ill-feeling developed in August, 1852, into a remarkable evidence of railway enterprise—the capture of an enemy's engine, the Midland seizing a Great Northern locomotive which had brought a train to Nottingham, as it was on the point of starting with a fresh load of passengers for London.



ARMOUR CLAD TRAIN IN THE EGYPTIAN WAR.

Although this incident probably stands alone in railway annals, the railway has become an important factor in war; and it may some day be an invaluable help in national defence. The armour-clad train, to the railway and military engineer, has ceased to be a novelty. It was used in the American Civil War and in sorties from Paris during the siege of 1871; and in the Egyptian campaign a British ironclad train, forcing its way along the line from Alexandria, made Arabi Pasha's men hurriedly seek shelter, for it was an aggressive train that no one would think of trifling with. It may be added that in 1894 there was an interesting public trial near Newhaven of a new steel-plated railway truck built for the 1st Sussex Artillery Volunteers, and mounted with a 40-pounder breech-loading gun, which can be fired in any direction with no perceptible effect on the permanent way and no material vibration of the truck.



BRONZE TICKET OF THE LEICESTER AND SWANNINGTON LINE.

CHAPTER XII.

FORCING THE RAILWAY INTO ST. PANCRAS.

A Remarkable Procession of Trains—The Bold Policy of the Midland—Forcing a Way into St. Pancras—London by Night—The Underground City—Some Lowly and Lonely Stations—The Size and Beauty of “Pancras”—Sir Gilbert Scott and the Midland Hotel—The Main Line Through a Graveyard—A Startling Guest at a Wedding Feast—Derby and its Development—The County Town in Olden Time—The Railway Works and their Influence—The Midland South-westward—A Chat about Birmingham—The Electric Light and Railway Toil—Purer Atmosphere and Health—A Great Railway Station.

RAILWAY companies, like ordinary mortals, are to a great extent creatures of circumstances; and the London and North-Western Company, unable to agree upon terms of amalgamation, discovered that the destiny of the Midland Company was not towards further development. The Great Northern, which had also sought amalgamation in vain, did not wish to lose a good customer, and thought the Midland might be content with the use of its line to town. But the Midland determined to enter London on its own track—to run in from Bedford. The traffic had grown so enormously not only on the Great Northern line, but on the London and North-Western through Rugby, that continual annoyance was caused to passengers and traders by delay. The Midland, to quote Sir James Allport, could never tell with anything like certainty at what time

their trains would reach King's Cross, though they might be in good time at Hitchin.

In the Exhibition year the traffic presented an extraordinary spectacle, for no fewer than 1,000 passenger trains and some 2,400 goods trains were delayed between Hitchin and King's Cross. By way of Rugby the transit difficulties were almost as great, notwithstanding that the London and North-Western put down a third pair of rails from Bletchley to London. At one time the traffic was so congested that at Rugby a procession of coal trains five miles in length bumped and banged in clumsy impotence regardless of the rage of London buyers; and in those days the monotony of goods traffic life was broken by such messages as these: "Stop all coals from Butterley Colliery for Acton, Hammersmith, and Kew for three days, as Willesden sidings are blocked up;" "Rugby is blocked so as not to be able to shunt any more;" and "Camden and North London are blocked with coals."

The line from Bedford to London—going through a pastoral country, rich in historic association and particularly in memories of John Bunyan's life, and by Luton, where the industry in straw-bonnets has made

"Some ladies' heads appear like stubble fields,"

—does not apparently encounter any great engineering difficulties; still the cost of constructing it amazed the shareholders and caused some flutter in the railway world. Towards the close of 1867 the directors sent out a circular intimating that the cost of the extension to London and of the stations there had proved

enormously in excess of the amount anticipated, and that the expense of carrying a railway into London was such as to defy all previous calculation. A request was then made for additional capital to the extent of £5,000,000, of which £2,150,000 was put down as the cost of the London line, the rest of the amount being for expenditure on the new line between Chesterfield and Sheffield and for rolling-stock imperatively necessary. The directors had to face much criticism, and a committee of consultation was appointed to confer with the Board as to the extent to which the projected works could be relinquished or deferred. The committee decided that it was absolutely necessary, in view of the growing traffic, to adopt steel rails instead of iron, to make ample lines, and to erect great storehouses; and said the money bill for five millions must be passed in its integrity. The money was found. With it engineering skill and hardy industry dived and delved in subterranean London in a fashion that would have surprised St. Pancras and the Phrygian noble, his father.

There is, notwithstanding our artificial life, always something impressive in driving to St. Pancras at night. Away east, west, and south stretches for miles the great world of London. Yonder the light is burning in the clock-tower at Westminster, and the House is crowded, for some great statesman is speaking. West-end mansions are gay and bright with festivity. The clubs are thronged, and everywhere is the murmur of social and political gossip, intermingled possibly with trade



INTERIOR OF ST. PANCRAS.



talk, for some men never get away from business. Down the river there are a thousand lights and shadows indicative of the happiness and misery of human life—of its good honest striving, its toil and enterprise, and of its idleness, loafing, vice, and crime. Darkness lurks in the quiet, half-deserted streets between the Embankment and the Strand; but the Strand itself is ablaze with light and resounds with traffic, and the hurrying crowd on pavement, in gutter, and struggling at street-crossing, has perhaps in its mind and heart as much comedy, burlesque, and tragedy as it has seen on the theatre boards.

But the London that you can see, with its clustering millions, its mighty fingers on the pulse of the commercial world, its roar of traffic by day, its thousand occupations by night, is scarcely more impressive than the underground London which its enormous size and endless requirements have necessitated. There are miles of subterranean ways in this great city, thousands of vast cellars and warehouses far beneath the streets, wondrous stores of wealth, and a gigantic army of toilers to whom daylight is almost as great a luxury as to the miner who swings his pick in the flickering light of the safety-lamp in the stifling air of the pit heading. After rattling in a hansom down Gray's Inn Road and through the large gateway at St. Pancras, you are perhaps in too great a hurry to get your ticket to think that the ground beneath you is all undermined, and that far below stretches one of the most interesting bits of subterranean London. "There are cellars that must receive

in the course of a year as many barrels of beer as there are travellers who pass through the station. Three trains, specially set apart for the conveyance of beer traffic—and more when the October brewings are on—leave Burton for London every day by the Midland route alone. Single firms reckon their storage-space at St. Pancras by the acre, and their stocks of barrels by the tens of thousands. Yet one stage lower, along the front of the hotel, beneath the terrace, runs a disused tunnel, through which the Metropolitan can any day they choose lay two additional lines; while crossing and re-crossing beneath the station itself winds the Midland's own line on its way to and from Kentish Town to join the Metropolitan. Finally, deep down below all, the Fleet, once a river, then a ditch, and now a sewer, flows along its now subterranean bed of colossal iron pipes." *

The diversion of the Fleet sewer was a work of great skill, peril, and cost; but it was accomplished without mishap, and space made for the underground lines, and for the vast cellars that remind one, with their great brick walls and arches, and labyrinths, of the famous Spanish wine-cellar in which Edgar Allan Poe placed the scene of his story "A Glass of Amontillado." St. Pancras Station has been likened to an iceberg, because the greatest part of it is beneath the surface; but its proportions above ground are by no means dwarfed, and afford a strange and pleasing contrast to the small, dreary, inconvenient

* "The Railways of England," by W. M. Acworth.

stations that obtained in George Stephenson's day, and still linger on some remote lines.

Railway stations differ in characteristics quite as much as men. There is the lonely, desolate station on the moorland, where "the dook preserves the game on both sides o' the line;" and the stationmaster or signalman occasionally gets a peer's dinner—a passing train having maimed a hare, or the telegraph-wire knocked a grouse, partridge, or pheasant helpless on the line. There are wild, blustering, wind-swept stations, like Dinting, in Yorkshire; and flower-bedecked stations, like Bakewell, in Derbyshire, or Flixton on the Cheshire Lines; and stations like Port St. Mary, with primitive wooden sheds and no platforms; and whimsical, ramshackle stations like some of those on the Irish lines. There are dismal and depressing stations both large and small; there are bright, light, picturesque stations both little and great; but it would be difficult to find on any line in the kingdom a station so capacious and so graceful as St. Pancras. The signalman, who has come up to London, perhaps for the first time, from his country cabin, where he scarcely sees a soul except the flying figures of the engine-driver and stoker on the express as it dashes by, or the phantom faces of the passengers peering up at him and then whirling into space, raises his eyes in amazement to the great sweep of roof, and pulls at his iron-grey hair, as if it were a lever, to steady himself in his wonderment at the fine canopied place, with its broad platforms, and many lines, and crowd of trains. Nor is it much

less surprising to thousands of passengers, who, amid the joy and sorrow of meeting and parting, express admiration at its proportions.

The station is no less than one hundred feet in height and seven hundred feet in length. Its wall girders, springing from the deepest foundation, are of such enormous strength that there is little fear of the station collapsing or being carried away by the wind; and its roof girders, though shaped something after the fashion of a lobster's claw, form an arch of considerable beauty. The roof has no less than two and a-half acres of glass in it. The ironwork and woodwork are painted in pretty sky-tints. The great span is light in colour and graceful in form, and filled with the echoes of pleasant voices. It is not even disfigured with sky-signs. The rage for advertisement has not climbed to the key of the arch, though the walls, after the fashion nowadays, are covered with the art and fine phrases of advertisers.

The St. Pancras Hotel, built by Sir Gilbert Scott from a prize design, stands at the end of the station, and forms, with its daintily-appointed refreshment-rooms, really a part of it. The hotel, large, comfortable, and even luxurious, is an architectural picture, with its warm, graceful façade in pointed Gothic; and it is undoubtedly one of the finest buildings in town, though London has, within the last decade, with illimitable wealth, and art culture, and industrial skill at her command, erected halls, mansions, hotels, and clubs that in their architectural beauty



ST. PANCRAS.

(From a Photograph by the London Stereoscopic Company.)

and upholstered loveliness almost realise a poet's ideal and embody a Monte Cristo's wealth.

The making of the line from Bedford, the excavations at St. Pancras, the construction of the station, and the building of the hotel, led to an expenditure altogether of about nine millions of money, and there was not only some outcry at this sinking of gold, but at what was considered a needless disturbance of the dead. The line, as every passenger to London by the Midland is aware, goes through old St. Pancras churchyard, where, amid the smoke and crowding of the great city, the trains dash and rattle over the graves. It is said that a railway, like some politicians, is without scruples, and will go through anything. No doubt there is a good deal of truth in the statement; but the Midland, finding it imperative to carry their line through the churchyard, were far from wanton in their treatment of the dead. Another burial-ground was purchased, and the mortal remains which during long years had been committed to the historic churchyard were re-interred in the new cemetery.

By tunnel, through cutting and many a broad pasture, the railway stretches northward to Bedford and Leicester to Derby. It goes by Wellingborough, the home of the locomotive, by Pytchley and Market Harborough, inseparable from hunting, and by many an historic bit of land, not the least interesting of which is the Rushton Estate, for associated with it is a strange legend. "From the Treshams the estate passed into the family of Lord Cullen. The second viscount had

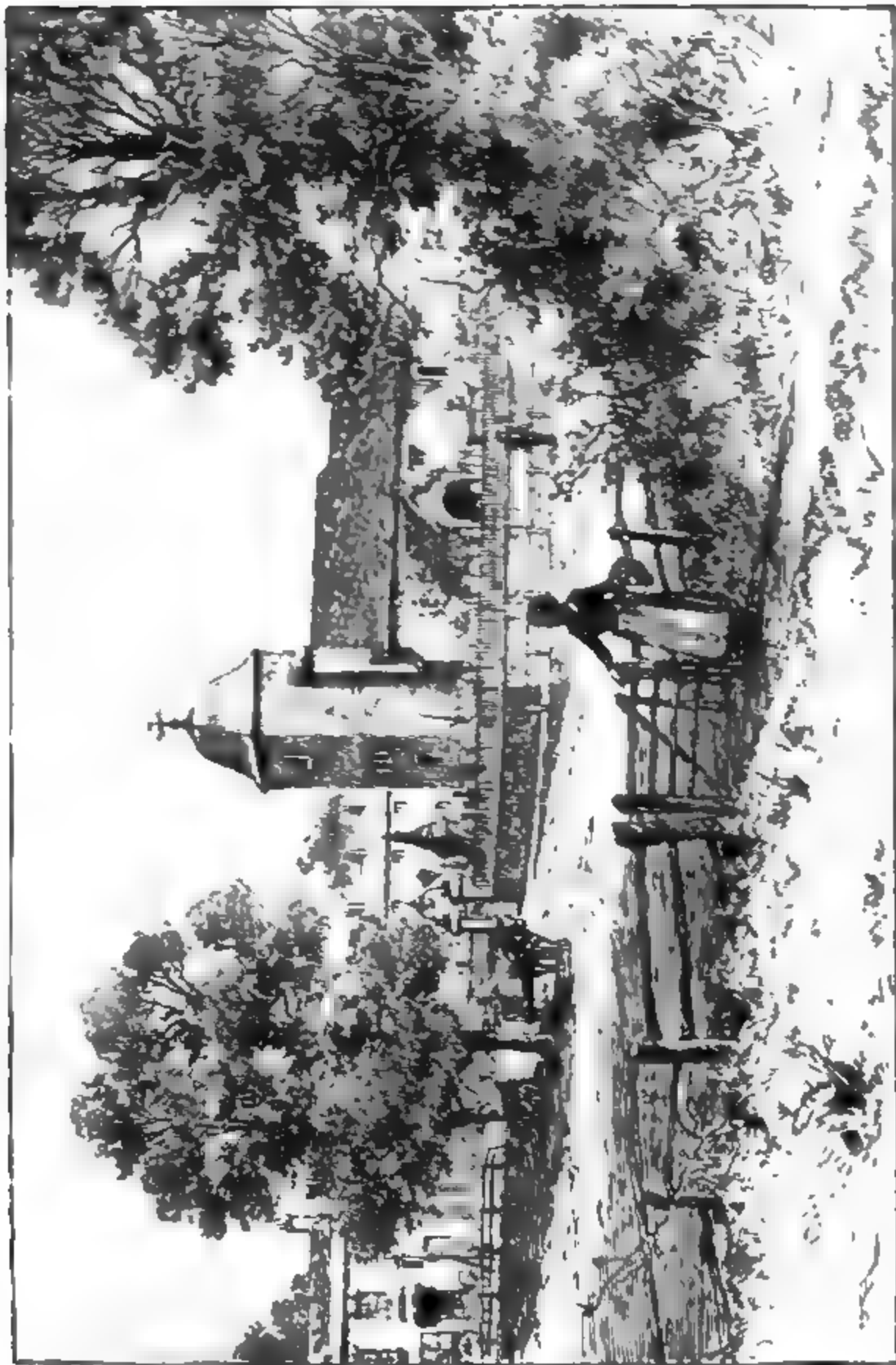
been betrothed, at the age of sixteen, to Elizabeth Trentham, a great heiress, but had, while travelling abroad, formed an attachment to an Italian lady of rank, whom he afterwards deserted for his first betrothed. While the wedding-party were feasting in the great hall at Rushton a strange carriage, drawn by six horses, drew up, and forth stepped a dark lady, who, entering the hall and seizing a goblet, 'to punish his falsehood and pride,' drank perdition to the bridegroom, and having uttered a curse on the bride, to the effect that she would live in wretchedness and die in want, disappeared—and the curse was in a great measure fulfilled."

The growth of traffic has necessitated the construction of an entirely new station, with two island platforms, at Leicester, and the new booking-hall was opened in the summer of 1892, the mayor of the town being the first passenger. At Derby the station improvements have been very extensive. The façade has been practically rebuilt, new offices have been erected, the platforms multiplied and vastly extended, and the old level-crossing near the bookstall superseded by a commodious footbridge, while several new tracks have been put down, and the line northward, crossing the Derwent, on the bridge George Stephenson made, has been widened by another bridge, placed side by side and level with the old one, and fitted with additional sets of rails. Derby Station has a different look from the one it wore when it was the property of the North Midland, when its buildings were scanty

and prim, and its quaint engines were despatched by flagmen in evening dress and tall hats.

There are two great industrial centres on the Midland—the St. Pancras goods station (allied to which is the Somers Town fruit and potato dépôt), with its large sheds, its gigantic inward and outward platforms, its vast loads of merchandise and army of workers; and the company's extensive shops at Derby, in which a multitude of men are employed engine-fitting and in the making of rolling-stock. One wonders what Derby would be like without the Midland Railway Company and their works. Defoe styled it “a town of gentry rather than trade,” and in the Assembly-room records there is a very frank entry showing how the aristocracy formerly looked down upon business—a leader of fashion, making a memorandum to the effect that she had given up the ballroom to the Countess of Ferrers, adding, “I told her that trade never mixed with us ladies.” That was a century and a-half ago. Since then, and particularly during the past fifty years, trade, chiefly developed by the railway, has mixed with everybody, given new life to the town, and more than doubled it in size; for in 1841 the borough contained only 37,431 inhabitants, whereas at the census in 1891 it numbered 94,146, and in 1894, 98,796.

Derby, unlike Crewe, the industrial centre of the London and North-Western system, has not been created by the railway. Notwithstanding its aristocratic leaning, it dabbled in trade—in lead and in wool—years before the first railway was laid; but it is greatly



OLD ST. PANCRA'S CHURCH IN 1884.

beholden to the railway for its modern progress, and its people are to some extent leavened by railway interests. Some idea of the importance of these interests, so far as Derby is concerned, may be gathered from the statement that the works, including the goods station at St. Mary's, the new carriage and waggon shops, the locomotive-building sheds, the stores, the offices and passenger station, cover more than 230 acres. The locomotive shops are at the back of the passenger station, the signal works at the north end, and the carriage and waggon shops at the south-west end; and they afford many striking scenes of industrial and mechanical activity. The homes of many of the Midland hands cluster within easy reach of the station. They stand row upon row, in street after street, stretching away along the Morledge, and through Litchurch, and by Osmaston Park; and the tenants, in the main hard-working, thrifty, thoughtful, contribute substantially to the town's wealth and are a power that must be reckoned with in politics. It is, in fact, exceedingly fortunate for Derby that the hotel at St. Pancras does lack one storey of its intended height, and that the central offices of the Midland Railway Company, which have lately been so much improved and extended, still remain in the county town by the Derwent-side.

One is eager at this point to travel over the Peak track, or to go north direct along the gleaming line; but first it must not be forgotten that one great limb of the Midland system stretches from Derby south-

westward, dealing with Burton-on-Trent and its huge supplies of beer; with the city of Birmingham and its growing trade; with Worcester, that still retains old-fashioned, cathedral-city notions, and with Gloucester, Bath, and Bristol. The old track, which includes the noted Lickey incline at Bromsgrove, is now one of the main sources of Midland revenue; and the city at the mouth of the Avon has great possibilities of development in connection with sea-going traffic.

But Birmingham is really the great trade and traffic depôt of the Midland on the south-western section. The city is a marvellous one. Its people are mercurial, dashing, "smart." You could, were she alive now, imagine Mrs. Gamp saying: "There's been an horful nice gent from Brum, a smilin' and a braggin'—and yer never 'eard sich a tongue. I says to Mrs. Harris, I says, if yer believes me, 'e's been and dipped it in sweet oil." Birmingham does not care a rap for the copy-book adage, "Self-praise is no recommendation." She has used self-praise as a ladder up which to climb, and being backed by mechanical ingenuity, industry, and commercial push, has nearly got to the top. The staid business man in Manchester or Leeds, who is devoted body and soul to buying and selling, derives a little amusement now and then from the volatile commercial traveller and trader of Birmingham; but after all, the city is light-hearted and self-confident to some purpose. It makes a conspicuous figure in the centre of the kingdom, with its 400,000 people, who have created a vast trade in guns, iron bedsteads,

hardware, and nicknacks, who have spent their money freely in dignified and graceful public buildings and street architecture, who have struggled along the rugged path of municipal and educational reform, and who have always plunged boldly into political fight, and soothed their restless lives by fostering a considerable taste for music.

Birmingham has, perhaps, lost its old reputation of being "the toy shop of England;" but it is, in some sort, the handmaid of the world, for the goods it turns out find their way to every part of the globe for use or adornment. In peace-time the city has a big trade; in war-time it is "pulled out of the place" with orders and glutted with prosperity. The bulk of traffic at the great goods station every day is enormous. At Worcester Wharf and at Lawley Street the huge warehouses are congested with goods, and the lines and sidings busy with traffic.*

The electric light, which already shines in thoroughfare, public building, merchant's office, and railway station, and is destined to make our homes brighter and healthier, has become an important agent in the handling of goods traffic. Mr. W. Langdon, the chief of the Midland Railway Telegraphic Department at Derby—to whom I am also greatly indebted for much information on train lighting and railway telegraphing—

* In conversation recently with a Birmingham merchant, the author was impressed by his strong sense of commercial security. "Look here," he said jauntily, "if the shipping trade isn't good, Liverpool's all awry; if there's a dispute in the cotton trade, Manchester suffers keenly; but nothing upsets us. You see, we've all sorts of trades, from guns to pens and buttons."

has given me some interesting notes indicating how generally the electric light is becoming an aid to business on the Midland Railway. After a reference to the beauty and power of the four rows of arc lights at St. Pancras, and to the busy scene at the new Somers Town goods depôt, "teeming with men and material," he writes :

"With all the latest appliances in hydraulic machinery at hand, and ample light in sheds and yards, at facing-points, and other places of vantage, there exists no impediment to despatch ; labour is economised, time saved, and safety to the life and limb of the employee largely enhanced. What does this really mean ? The minimising of risk to the employees is a benefit everyone will recognise : this in itself is probably worth all the cost. But there is another advantage. Quick working in the handling of trains, in the loading and unloading of trucks and trollies, means economy in space, economy in buildings, economy in time. It means the saving of a large capital outlay. It is here that the policy of the Midland directors, in making use of the latest developments of practical science, is securing profit for their shareholders.

"At Worcester Wharf, Birmingham, and in the long range of cellars devoted to bonded stores, the electric light is used. Probably, however, in no place will its usefulness be so thoroughly demonstrated as at the company's chief Birmingham depôt at Lawley Street. Here large warehouses, destined to provide many acres of floor-space, are in rapid construction. On one side of

the yard stands a fine building devoted to hydraulic power, while on the opposite side is that for the electric lighting machinery. As at Worcester Wharf, the offices, yards, warehouses, and sidings will be worked under the fullest advantages, provision being made for the employment as required of some six to eight machines for arc lighting. At Hunslet, the chief depôt for Leeds, the remodelling is complete, and the convenience derived from the improvements so far installed has had a marked effect upon the mass of traffic which the industries of the busy commercial centre call upon the railway company to dispose of. Here offices, warehouse, and yard have the service of the electric light. At Bradford the Midland Railway Company have replaced the old, cramped, uncomfortable passenger station with a model provincial station. Built entirely of stone, with spacious platforms and roomy offices, covered cab approach, and well lighted, it conveys an impression of its capability to deal with any amount of business. Lighted throughout by means of the electric light, even to the waiting-rooms, bookstalls, and telegraph-office, the walls of the station and the decorations of the several offices and waiting-rooms retain all their original freshness."

Mr. Langdon looks forward to the time when all the Midland Railway centres, including Bristol, Gloucester, Derby, and Carlisle, will have the benefit of the electric light; and says that the Midland Railway Company, with the object of providing a purer atmosphere for their clerks, are installing the electric light at



NEW STREET STATION, BIRMINGHAM.

(From a Photograph by T. Lewis, Birmingham.)

the offices of the staff at Derby, at a cost of £11,000. He is a steadfast champion of the electric light; and contends that the company will really gain by the outlay—that they will have a healthier and more energetic staff, and get more work out of their men.

Running back to Birmingham for a moment, New Street Station presents the most vivid picture of the swift go-ahead life of that city. The traffic has grown so rapidly that it has become absolutely necessary for the London and North-Western Railway to improve the approaches, to double the south tunnel, and to put down additional lines. What improvements and extensions will be necessary in the next quarter of a century it almost passes the wit of railway engineers to conceive. The crowd of restless humanity gets greater every year. It was big whenever John Bright spoke in Bingley Hall; it was bigger when the Queen visited Birmingham in 1887; and there was a considerable crush into New Street when Mr. Gladstone spoke in the Town Hall in 1888. But New Street Station, congested and bewildering to its utmost, though the traffic is carried on with care and skill, must be seen when the great multitude is surging to the Onion Fair, or to the Cattle Show, or on some night when the great muscular crowd from the Black Country invades the city intent on the delights of the pantomime.

“This station, which is one of the largest in the world, is,” writes a railway friend of the author’s, “used jointly by the Midland and the London and North-

Western, the Midland trains of recent years having been dealt with on the south and the London and North-Western trains on the north side of the station. It covers an area of nearly twelve acres. There are booking-offices at the entrances on either side and on the centre platform (both high- and low-level), where passengers can obtain tickets for the West of England, South Wales, London, Leicester, Nottingham, Derby, Sheffield, Leeds, Bradford, Manchester, Liverpool, York, Newcastle, and all parts of the Midland Counties, North of England, Scotland, and the North of Ireland. To accommodate the traffic there are six platforms, in addition to several bay lines, and from morning till midnight these are in constant use for the reception and despatch of trains; and the bridge which spans the station from Worcester Street on the south to Stephenson Place on the north is alive with passengers. Some idea may be gathered of what is transpiring day by day when it is explained that, apart from excursion traffic, there are five hundred heavily-laden trains passing in and out of the station within the twenty-four hours, the most striking feature of the traffic being the enormous influx of passengers in the morning by the business trains, and their exodus in the evening."

CHAPTER XIII.

THROUGH THE PEAK TO THE MERSEY.

The Rough Land of the Peak—Singular Engineering Projects—Dukes and Railways—The Tunnel Beneath Haddon—Through Derbyshire Dales—What Mr. Ruskin Thinks—From Factory to Field—Some Big Viaducts—A Pretty Land—Working Towards the Warehouse City—Gouty Travellers—How Streams Hide—Difficulties at Dove Holes—The Cottager and the Landslip—The Midland at Manchester—The Central and other Stations—A Coming Improvement—The Run to Liverpool—Emigrants and the Cholera—The Overhead Line—The Railway Under the River—A Strange Variety of Passengers—The Ship Canal and Mersey Trade.

THE Midland are not afraid of grappling with a big task. When one thinks of their engineering daring in the Peak of Derbyshire, their deep cuttings, tunnels through hill breasts, and lofty viaducts, it seems almost incredible that the North Midland rejected the line proposed by Vignoles through the ridge to Clay Cross and direct to Sheffield because of the steep gradient. The Midland, unexhausted by their task of getting into London, determined to drive their line into the London of the north—into Manchester. The country, with its crags and chasms and curious underground formations, and crumbling limestone and rugged gritstone edges, was considered by many inaccessible. Still, the district right away from Matlock, where the great rent in the Derbyshire strata begins, to the depths of Miller's Dale, to the heights of Buxton, and away northward to the rocks about Lady Bower, and the

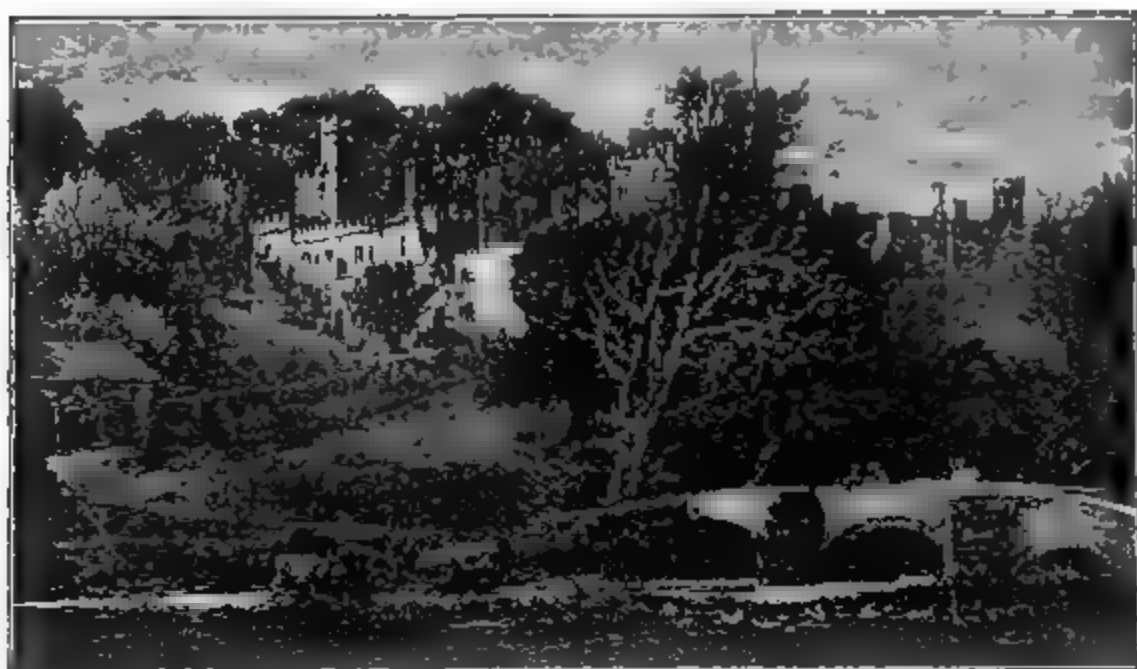
vales of Ashopton, had a singular attraction for railway engineers, and even investors, during the railway mania, did not look askance at the district lying at the feet of Kinderscont and Kinderlow—a rough land yet, in many places, of rock, ravine, and moorland, a tract in which mail-carts and their drivers get snowed-up in winter.

“Neither the wild loneliness of Derbyshire,” says a writer on the railway mania, “nor the paucity of the inhabitants, arguing a corresponding paucity of traffic, deterred projectors from invading the district—on paper. If all their plans had been carried out, the ridge of Froggatt Edge, which has hitherto proved an insurmountable barrier, cutting off the neighbourhood of Castleton, Hope, and Hathersage from all communication by rail with Sheffield and Yorkshire generally, would have been pierced or crossed by half-a-dozen lines; one a great trunk railway between Hull and Holyhead, and others aiming at Macclesfield, Buxton, or Bakewell.”

Three years afterwards, in 1848, a railway start was made through this rugged land by a line from Ambergate to Rowsley, eleven and a-half miles in length; but it was not until 1860 that the Midland were authorised to carry the railway further, to extend it another fifteen miles to Buxton. Some of the railway projects through the Peak country were so apparently Utopian that they excited ridicule. One was styled, because of its interminable tunnels, “The Flute Line;” another, because of the moorland it would traverse, “The Bilberry and

Besom Line ; ” and a third, probably on account of the heavy cost of construction and the unlikelihood of dividend, “ The High Pique Line.” The proposal lately before the Select Committee of the House of Commons to run a railway through “ The Dukeries ”—one of the finest bits of “ old England ” remaining, with its famous oaks, and wide stretches of park-land—obtained the favour of the Duke of Newcastle. But railways were not so popular with dukes thirty or forty years ago. The sixth Duke of Devonshire—noted for the dignity of his manner and the splendour of his retinue as ambassador to the Russian Court on the accession of the Emperor Nicholas to the throne—had no particular objection to a railway going through Chatsworth Park, but he said it must be carried beneath a covered way. The late duke declined to permit the making of a railway, even under a covered way, on his domain ; though in another direction, in the Barrow-in-Furness district, the Cavendish family have taken great interest in railway development. The late Duke of Rutland did, after some misgivings, allow the railway to go through his Derbyshire land, but on condition that not a tree was touched and the game disturbed as little as possible ; and the line was taken beneath the hill at the back of Haddon Hall so adroitly, and with such little evidence of its presence, that standing on the old bridge crossing the river Wye, or wandering about the moss-grown terrace, or the quaint oak-panelled rooms of the grey-stone hall, rich in relics of the time when Sir George

Vernon reigned there as "King of the Peak," you never give a thought to the steel track just behind you, and would hardly be surprised to see a hawking-party bustling through the crumbling doorway into the worn courtyard, or to hear the shouts of the hunters as they



HADDON HALL.

come in from the chase, thirsty and clamorous for flagons of ale.

The track from this point, through Bakewell, by Hassop and Longstone, through Monsal Dale and Miller's Dale, is exceedingly picturesque. The river Wye plays at hide-and-seek with you. The railway crosses glen and dale, and penetrates limestone crags, and winds about the rugged faces of the rocks; is here hidden by foliage and there looks down from a great height on rippling river or moss-grown dell, or fern-sprinkled chasm or verdant slope, or is hemmed in by great masses of bare rock, stern and forbidding in look,


like some men who have become grim and hard with giving and taking no quarter in the fight of life.

Mr. Ruskin, in his indignation against railways, has described this land with vivid pen in a letter that deserves to become historic. "Derbyshire," he says, "is a lovely child's alphabet. On its miniature cliffs a dark ivy-leaf detaches itself as an object of importance; you distinguish with interest the species of mosses on the top, and you count, like many falling diamonds, the magical drops of its petrifying well; the cluster of violets in the shade is an Armida's garden to you. It was a meadow a minute ago, now it is a cliff and in an instant it is a cave; and here was a brooklet and now it is a whisper underground; turn but the corner of the path and it is a little green lake of incredible crystal; and if the trout in it lifted up their heads and talked to you, you would be no more surprised than if it was in the 'Arabian Nights.' And half a day's work of half-a-dozen navvies and a snuffbox full of dynamite may blow it all in Erebus and diabolic night for ever and ever! In almost every other hill district, and in all rich lowland, the railway kills little more than its own breadth and a square mile or two about every station, and what it leaves is as good as what it takes. But in Derbyshire the whole gift of the country is in its glens. The wide acreage of field and moor above is wholly without interest; it is only in the clefts of it and the dingles that the traveller finds his joy; and in those clefts every charm depends on the alternate jut and recess of rock and field, on the successive discovery

of blanched height and wooded hollow ; and, above all, on the floriated banks and foam-crisped wavelets on the sweetly wilful stream. Into the very heart and depth of this, and mercilessly bending with the bends of it, your railway drags its close-clinging damnation."

His picture of the scenery is worthy a lover of Nature and an artist ; but his tilt at the railway is somewhat Quixotic. It is useless and it is unjust. The line which he says was made in order that a Buxton fool may be able to find himself in Bakewell at the end of twelve minutes, and *vice versâ*, has wrought little havoc amongst the clefts and glens. It has not blasted all the rocks away ; it has not covered in the brook. It winds about the cliffs and bridges the river often, but the beauty of the locality is not destroyed. Many people admire the line that has made its way into this glen-land, and think its graceful iron bridges and the viaduct in the dale not unsightly, not misplaced, seeing that they represent some of man's best toiling in the midst of some of Nature's best work, and place the industrious in foundry and factory miles away in half-day touch with the crag-fringed glades that give Mr. Ruskin such delight. No angler throwing the fly for trout or grayling in the Wye, in the bed of the dale, no pedestrian sauntering beneath the great arches of the viaduct, can have failed to notice the solidity, combined with grace, of the lofty fabric, which has three fine centre arches and is nearly one hundred feet in height.

But if Mr. Ruskin is indignant with a railway



of this altitude one shudders to think of the feeling he must entertain towards the Lancashire, Derbyshire and East Coast Railway Company, for they contemplate the construction over the Midland line in Monsal Dale of a viaduct nearly 300 feet high. The Dutton viaduct across the river Weaver is 60 feet in height, the Stockport 90 feet, the Dent Head 100 feet, the Congleton 114 feet, the Dinting 120 feet, the viaduct in the Vale of Llangollen 150 feet, and the Ribblehead viaduct, in the midst of the wild desolation of Blea Moor, is in its highest part 165 feet; but all these structures will be dwarfed by the new viaduct in Monsal Dale, which will be as high as the clock-tower at Stephen's, and the loftiest viaduct in England.

Just beyond, near Litton Dale, is one of the prettiest bits of scenery in Derbyshire. Passengers fly past it every day in the Manchester express without seeing it. *Water-cum-jolie*, for such is its poetic name, is not a tourist haunt. It is practically unknown. It is inaccessible to the tripper. It is by the line side, and not very deep down below it. As you dash along the short open space between the two tunnels you get a fleeting glimpse of it, and exclaim to yourself, "What a lovely spot!" and have a sort of yearning that you would like to live there when you retire from business or from the feverish quest for fame. The river Wye winds gracefully; is deep and silent. It has scarcely a ripple. The music of its voice is still. But there are beauteous lights and shadows on the water, which is

hemmed in by almost perpendicular crags, that rise sheer above the river's brink for some feet, and then on one bank slope away beyond their fringes of trailing foliage towards the rich woods that climb to the shoulders of the hill, sheltering a reposeful homestead on their way, and on the other stretch away in moorland pastures to still remoter solitude.

Blackwell Mill Junction, where the line curves to the left, round the rocks to Buxton, recalls the determined opposition of the three companies to the Midland advance in the Peak. At all hazards the latter company must be kept out of Lancashire. It was for some time a case of diamond cut diamond; but by the merest chance the Midland secured an important agreement with the Manchester, Sheffield and Lincolnshire Company, enabling them to get by way of New Mills to Manchester. The heads of the Midland went to "spy out the land" for a line from Buxton to the city of cotton warehouses. In a by-lane they met several officials of the Sheffield Company, and this accidental meeting, followed by negotiations, resulted in an undertaking that the Midland trains should be allowed to run over the railways of the Sheffield Company to or from Manchester, and everywhere else in Lancashire or Cheshire or beyond. Manchester men, collectively, in the City Council and in the Chamber of Commerce, encouraged the Midland to provide them with a direct route to Derby, Leicester, and Nottingham; and evidence in favour of the project was given by firms owning some of the largest warehouses in the city.

But the London and North-Western and the Great Northern were very earnest in their opposition, and raked up the most extraordinary objections to the proposed line, showing a tender solicitude even for gouty patients, and prompting humorous question and answer in Committee.

“Will you,” asked Mr. Merewether, “assume that a man comes over the great through-line to Blackwell Mill?” “Yes,” replied Dr. Robertson. “That is the junction for your invalid?” “Yes.” “My learned friend has referred to gout as a disturber of the temperament?” “It is.” “Your gouty patient—a gouty merchant from Manchester—is of quite as warm a temperament as most people?” “Yes.” “Will you bring him from Manchester with his gout and his Manchester temperament? Will you put him out at Blackwell Mill to get into the branch train to go to Buxton?” “I have been told so.” “Do you put it as a medical view that going along a gradient of 1 in 60 would exasperate a gouty patient more than being put out at the station at Blackwell and being sent round to Buxton?” “I consider that going along a gradient of 1 in 60 would exasperate any man, gouty or not.”

The line was made, and opened for traffic in 1863, but not until singular engineering difficulties had been overcome. The track passes at a steep gradient up Great Rocks Dale, reaches its summit level at Dove Holes, and then descends towards Manchester through a tunnel nearly two miles long. Close to the south end of the tunnel a subterranean stream was found. Its

course was diverted, but the underground brook played pranks with the engineers, disappearing and re-appearing through fissures and holes in a very odd way. The Peak streams, in fact, are all full of adventure and frolic. One still flows through the Peak cavern at Castleton, another plunges into an abyss in the Speedwell mine. In 1881 the Bradford brook, which had been in the habit of running into the river Lathkil, forsook its bed altogether and found an underground course beneath the fields and homesteads right away from Alport to Darley Dale—a distance of nearly six miles.

Not only had the engineers to contend with subterranean flows of water, but with landslips and with fierce feuds between the English and Irish navvies, who, like the early dwellers in Peak Forest, lived in huts and in cave-houses; and, unable to hunt the wild boar and the wolf after the fashion of the ancient Britons, varied the monotony of their three years' toil in this wild, lonely land by chasing and fighting each other. Even when the line was completed, and goods trains had traversed it for several months, another mishap occurred—a landslip at Bugsworth—that shifted sixteen acres, temporarily altered the course of a stream, and made havoc with the viaduct: it was practically a little earthquake. The mass of shale moved off the sandstone, the station trembled, the viaduct cracked and opened, the stone walls on the hillside came down pell-mell; a farmhouse collapsed into a heap of ruins. Existence at Bugsworth was at that time

decidedly exciting, and it would be idle to gainsay the wisdom of the local cottager's remark: "You see, when paving-stones of the cottage floor began to stand up on end, I told my missus it was time we were moving."

A new viaduct, on which 400 men worked day and night, was quickly but securely constructed, and the line was opened for passenger traffic in 1867, the Midland at last having accomplished its object of getting direct into Manchester. Originally the company ran into the London Road Station, and their goods depôt is still near, on the site of Ancoats Hall; but now their passenger traffic is dealt with at the Central Station, just off Albert Square, a station somewhat after the style of St. Pancras in shape, and one of the busiest termini in England. The station handles the traffic of the three companies forming the Cheshire Lines Committee; and there is particularly a quick ebb and flow of human life by the hourly express service between Manchester and Liverpool. Not only do the Midland use this station as their terminus, but much traffic surges into it from other directions in addition to London, Birmingham, and the Peak. The suburban railway made by the Manchester, Sheffield and Lincolnshire Company, and opened from London Road Station to the Central Station in May, 1892, also swells the bulk of traffic. The line serves Chorlton-cum-Hardy, Alexandra Park, Fallowfield, and Levenshulme, and will ultimately, no doubt, creep completely round the city. Waggish passengers, residing in the suburbs, told, soon after the line opened, many funny stories of

train delays, of journeys of two miles in six hours, and of one train being altogether forgotten in a cutting ; but the line is serving an exceedingly useful purpose, and when it is in touch with the four chief stations will be of greater importance, for it must ultimately assist in dealing with the passengers ever crowding through Manchester. The time may come, indeed, when travellers arriving at London Road Station, and desiring to go into the heart of Lancashire, or to the coast, will have no need whatever to break their railway journey by cab-ride.

The Central Station has been somewhat drastically styled one of discomfort, with ramshackle booking-offices and waiting-rooms, with platforms so insufficiently covered that on wet days the pathways are flooded here and there with pools of water. But it is not quite such a dreary terminus as this description indicates. Its wooden platforms are preferable, after all, to the black, stone platforms at London Road Station ; and certainly the Central Station is as attractive as the Exchange Station, the comparatively new but ungraceful property of the London and North-Western, about which, or the Victoria Station adjacent, Mrs. Humphry Ward, in her novel "David Grieve," says : " It was a damp October day. Above, the sky was hidden by a dark canopy-clad smoke ; the cathedral on its hill rose iron-black above the black streets and river ; black mud encrusted all the streets and bespattered those that walked in them. Nothing more dreary than the smoke-grimed buildings

on either hand, than the hideous railway station across the bridge, or the mud-sprinkled hoardings covered with flaring advertisements which led up to the bridge, could be well imagined. Manchester was at its darkest and grimmest."

Manchester, fortunately, is not always dark and grim. The sunlight occasionally gets through the murky canopy, and plays about the cathedral, and the Styx-like river, and the thousand human forms pressing for business or recreation towards the two stations that dominate Strangeways. Life hereabouts, as well as at the Central Station, is sometimes rendered disagreeable by the influence of rain that falls on the traffic and dust of a great city; but it is not always raining in Manchester. In fact, some of its citizens dare to assert that this great mart is getting a fairer proportion of fine days than formerly, and that it is losing its reputation as "the wettest place in England."

There are passengers even who are daring enough almost to admire the Central Station, with its bustle of people and prodigal array of brightly-covered literature on the wide and yet overcrowded bookstall. At night when the station-approaches are illumined with arc lights, and the ticket-"sheds," refreshment-rooms, and bookstalls with incandescent lamps, it looks almost brilliant; but it must be admitted that the station is too crowded, for the traffic has grown enormously since the line through Warrington to Liverpool was opened on July 9, 1877, and the hourly system of express trains was first established. The extension

of the station is only a question of time. It is probable that the three companies will make a clean sweep of the buildings towards Deansgate; or, better still, acquire the properties that stand between the terminus and Peter Street—or “Theatre Street,” as it is familiarly called by Manchester playgoers; buy the Theatre Royal and demolish it, and build a new station rivalling St. Pancras, with handsome booking-halls, waiting-rooms, and refreshment-buffets, and a great hotel—the latter with its façade to the thoroughfare that has so long been associated with the drama, and is always crowded at night with people eager for instruction, amusement, or dissipation.*

Since the days when the Midland Railway Company ran their passengers into the dreary-looking station at Brunswick Street, along a line that seemed to belong to everybody and to consist chiefly of level crossings and signal boxes, Liverpool has wonderfully improved with regard to railway accommodation and travelling facilities. Its great stations—Lime Street, the Central, and the Exchange—are centres of bustling life, of passengers coming and going; and scarcely a day passes without the reminder that the city by the Mersey is not only the English but the Continental portal to the New

• The platforms at the Central Station have recently been greatly extended and covered in; but the most important railway extension has been the construction of the gigantic viaduct at Cornbrook, at the cost of a quarter of a million sterling. This impressive mass of brick, stone, and lattice work, eighty feet in height, bears three lines of rails, and the reconstructed line gives in many ways more elbow-room at the Central Station. Twenty years ago the traffic was within one hundred trains per day. Now four hundred run along the track.

World. On the platforms may be found groups of Germans, Swedes, Poles, of men, women, and children of nearly every European nationality, surrounding curious luggage, and, in railway porters' opinion, "jabbering a lot of nice lingo." Railway travel develops many interesting situations; but it has created few more bewildering than those occasionally to be seen during the Russian famine, when a number of peasantry, weary of the Czar's despotic rule and black bread, or no bread at all, came through England on their way to America, and clustered, apparently hopeless, on the platform at the Central Station. They were in costumes that, in spite of their crumpled shabbiness, recalled the garb of Count Arnheim in the opera of "The Bohemian Girl;" and looked like fugitive kings and emperors beside the thick-set railway porter, in capacious velveteens, whose duty it was to put them on the right track towards the "free land." What the Russians thought of their rough but kindly guide it is impossible to say; but he grinned, and exclaimed in amazement as he tried in vain, with a stumpy pencil, to get a list of their names, and then sympathetically remarked, as he looked at their wan faces, "There's no wonder at the chaps being ill; even their names is all coughs and sneezes."

The Russian famine, produced to a great extent by sheer laziness and the hopelessness born of chronic misery, was followed by Asiatic cholera. But the plague did not dismay the delegates to the Railway Congress at St. Petersburg. Sir Andrew Fairbairn, a

director of the Great Northern Railway, made a pretty speech in French at a banquet *à la Russe* there, saying, "I fear Russian hospitality far more than the cholera." But the epidemic proved a heavy tax both on the railway and the steamship companies at home, and the latter not only suffered from a decreased traffic, but they were obliged to pay the expenses of many of their passengers in quarantine. There was, in a humbler degree, some loss and much grumbling in Lancelot's Hey—that curious corner of Liverpool in which seaman, emigrant, dock-labourer, shore-porter, crowd to eat and drink and talk, in strange dialect and patois, of subjects never heard of in politics and society.

Liverpool, in its desire to make locomotion easier and to quicken the transit of goods, has contemplated some bold schemes. At one time there was a proposal to throw a bridge, a mile and a-half long, across the Mersey, from the Custom-house in the city to the Market-place in Birkenhead. And when Manchester began to talk about its Ship Canal, Liverpool replied by advocating a system of plateways along the roads, along which it was seriously thought that heavy vehicles might be hauled.



SIR ANDREW FAIRBAIRN.

(From a Photo by Maull & Fox, Piccadilly.)

The latest development of enterprise is the Overhead Electric Railway, which runs a distance of seven miles by the docks, and is certainly a novelty, with its tilting and swinging bridges, and carriages with "glass panels all round, to allow passengers a full view of the many interesting objects to be seen on every side"—the broad river, with its crowded ferry-boats, and stately liners, and big steamships, and miscellaneous craft, and the docks congested with shipping, loading and unloading amid the rattle of cranes, and the banging, thumping, and shouting that seem inseparable from the handling of cargoes.

The line, with the exception of one short length, is entirely overhead, and is, in the main, built just above the old dock railway, which has now become a goods distributor only, for the stout, swaying omnibuses that used to try to please everybody by running on roadway and rail have gone off the track. The structure is of wrought-iron and is not ungraceful, with its massive pillars and girders, and iron flooring, along which the permanent way stretches, not by much classic architecture, but by huge granary-stores and warehouses, and by the moving limbs of commerce that pull and tug on dock-side. The stations, thirteen in number, are admirably adapted for a hasty passenger traffic, and the merchant, the broker, the business man, the shipowner, the captain, the seaman, and the dock-labourer have little cause of complaint as to facility of getting about.

In the generating station, formed out of twelve arches beneath the Lancashire and Yorkshire Railway at

Bramley Moore Dock, four powerful engines drive the dynamos, and the electricity is carried north and south along the overhead line by a steel conductor placed on porcelain insulators. Hinged collectors slide upon the conductor, making connection between the motors on the train and the dynamos in the generating station. On the City and South London Railway* the motors are placed on a separate locomotive; but here they are fixed on the passenger carriages and are under the control of the driver, who alone carries the key to the secrets of science and motion. The carriages, each of which will seat fifty-six persons, contain compartments for two classes of passengers, and in the humbler section there is ample accommodation for sailors' bags, engineers' tools, and implements.

The trial run over the track was made on January 7, 1893; and on February 4 the railway was formally opened by Lord Salisbury, who, relieved of the cares of the State, had both time and inclination to assist in the application of one of his favourite sciences—that of electricity. His lordship was welcomed at the generating station by Sir W. B. Forwood, who referred to George Stephenson's line over Chat Moss as “the forerunner of steam locomotion;” and drew the parallel that the Overhead Railway, the first built in this country on an iron viaduct so as not to interfere with the traffic of the streets it traversed, the first worked by an electric current transmitted from a generating station over a

* See *post*, p. 518.

system of seven miles, and the first protected by electric automatic signals, might be the pioneer of electric railways in all our great cities.

A striking contrast between the locomotion of the past and the present was drawn by Lord Salisbury himself, for he said that almost the earliest thing he could recollect was being brought down to his mother's house in that neighbourhood, and they took two days on the road and had to sleep half-way. When he compared that journey with his journey down to Liverpool on the previous day he felt what an enormous distance had been travelled in the interval; and perhaps a still larger distance and a still more magnificent rate of progress would be achieved before a similar interval of time should have elapsed from the present day.

The task of opening the line was an easy one. His lordship pushed a button in the plinth of a silver inkstand, and the great engines that generate the electric force began to work with a roar that was appropriate to the event, for it must have occurred to the orators, who tried to make themselves heard above the din, that if the company were supplying the lightning, Thor had secured the contract for the thunder. The inkstand, detached from the delicate mechanism it concealed, was presented to Lord Salisbury as a memento of his useful but deafening work as a railway engineer; and it was not only a handsome but an instructive gift, bearing a border of ships' cables indicative of Liverpool's calling; a chasing emblematic of the



SWING BRIDGE ON THE OVERHEAD RAILWAY OVER THE ENTRANCE TO STANLEY DOCK, LIVERPOOL.
WITH ORDINARY ROAD BRIDGE.

strength and swiftness of electricity, and a clever model of the Overhead Railway, or rather of that section of the bridge opposite the church of St. Nicholas—a church on which many an emigrant has wistfully gazed before mingling with the bustle on the landing-stage and stepping off his native land.

Lord Salisbury was taken over the line by a special train, which was decorated with flags, and converted into a sort of travelling garden, with plants and flowers. Afterwards he was entertained at luncheon by the Mayor, and in a humorous, interesting speech spoke of the prospects of the new railway and of the triumphs and possibilities of electricity. The Overhead Railway, he pointed out, was already known to our American cousins; but it was an institution open to praise or blame according to circumstances. Where it ran alongside docks it was an admirable institution; but when it looked into attic windows it was less advantageous. The London County Council were very fond of new ideas, and he said, amid great laughter, that he looked forward with horror to their being encouraged by the people of Liverpool to take an overhead railway down Oxford Street and the Strand.

The railway was opened for public traffic on March 6, in the presence of a curious crowd; and with its five-minute service of trains is now doing a great amount of business, notwithstanding the keen competition of the light omnibuses that are driven along the line of docks, and are eager to take passengers the entire route for “twopence, in or out.”

The tunnel beneath the Mersey, however, strikes one as being the most daring bit of railway enterprise in Liverpool. It is, with its approaches, $3\frac{1}{2}$ miles in length, is 21 feet in height, and is 30 feet below the river's bed. The borings for it were made with such nice calculation, through cellars of forgotten houses and a land of tipped rubbish and the old strand, through the boulder-clay and into the heart of the red sandstone, that the burrow from Birkenhead and the burrow from Liverpool joining at mid-distance under the river were only one inch out of line. The tunnel is ventilated by the Guibal fan, and is far pleasanter to journey through than many a subterranean railway that has only earth and sky above it.

The tunnel serves a considerable river-side population, and is also of importance as a connection with the great railways that have carried their lines towards the banks of the Mersey. It is also to some extent a holiday line; and the excursionist who has gone down the breezy river in the *Daisy* or other ferry-boat to New Brighton, and sauntered or wildly ridden along the sands, and overcome his hunger in one or other of the free-and-easy eating-houses that stand opposite the fort in the curious row styled "Ham and Egg Terrace," occasionally goes back through the tunnel, so that he may show his mate, wife, or child this successful piece of engineering, and relish their surprise as they are taken up the lift, "the moving-room," from the subway to the road level at St. James's Street Station.

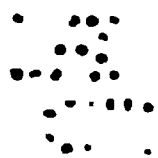
Since the line was opened to the public on February

1, 1886, the traffic has steadily increased. The Park extension was opened on January 2, 1888, the Rock Ferry extension on June 15, 1891, and the Central Station extension on January 11, 1892. The number of passengers carried in the first five months of 1886 was 2,492,957, exclusive of season-ticket holders, and in the first six months of 1893 the number had increased to nearly 4,000,000. No fewer than 320 trains pass and re-pass beneath the river daily, and counting season-ticket holders, more than ten millions of passengers venture through the tunnel yearly. Perhaps with the exception of some of the trains running down from town to Harwich, there are none in England that contain such a variety of travellers as these tunnel-trains. One passenger says he has "travelled in first-class carriages with fisherwomen with their baskets, with beggar-children without shoes on, with sailors and workmen in working clothes, and with Malays—with all sorts of people riding first-class without first-class tickets."

In 1885 the company were authorised to charge a special toll of five miles for the use of the tunnel; but a proposal, in the shape of a Provisional Order Bill, came before the Joint Committee on Railway Rates and Charges, in 1892, to the effect that the tunnel should be placed in the same position as an ordinary short-distance line. The company pleaded that they might retain their old power to lay a charge of five miles over the line, explaining that the tunnel, which was simply delved under the sandstone, entailed an expense of £40,000 a year to keep the water out



THE MANCHESTER SHIP CANAL, ABOVE EASTHAM.
 (P. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100)



The plea, considering the cost of the tunnel and the expense of its maintenance, was not unreasonable. Certainly the profit on the outlay of $2\frac{1}{4}$ millions has not bewildered the shareholders, and they have not, like Princess Badoura in the fairy story, found their investment yield much gold dust.

Not the shrewdest merchant on 'Change at Manchester or on the Flags at Liverooool can gauge the enormous development of traffic that is likely to take place between the two cities within the next few years. There is railway extension and deviation without end in South Lancashire, on the Cheshire border, and in North Wales. The great railway companies that serve Mid-England are closely connecting their systems in the Ship Canal and the Mersey; and however keen the railway competition with the canal may be, the companies do not mean, through lack of transit facilities, to lose any opportunity of securing the carriage of raw material and goods inland in any direction beyond Salford Docks. The canal will probably never yield the original shareholders any profit on their commercial enterprise or Lancashire loyalty; but it has already given a gigantic impetus to trade. It has established a steamship line between Manchester and London; ocean-going ships churn its waters; on its banks are great cargoes; and it is increasing the traffic receipts of more than one railway. It has thrust into life a powerful spirit of competition that not only hovers about Liverpool, but disturbs the maritime traders of Bristol and Southampton. It has created an era of dock acquisition and extension; and

the three ports, like the noted characters in Captain Marryat's novel, are engaging in a three-cornered duel, in the hope of getting more American trade.

The London and South-Western Railway have purchased the docks at Southampton, the Midland Railway Company are nibbling at docks at Bristol ; three or four railway companies, noting the utility of the Garston Docks of the London and North-Western Company, and the purchase of the Otterspool estate for the Cheshire Lines Dock on the Mersey, are hungering for loading and unloading berths by the river-side ; and the Mersey Docks and Harbour Board, though it has the reputation of being somewhat conservative in its ways, is about to launch into the expenditure of more than half-a-million in extending Prince's landing-stage by three hundred feet at the north end, in constructing a new landing-stage, twelve hundred feet long, abreast the Waterloo, Trafalgar and Victoria Docks for quicker dealing with the coasting trade and cattle traffic, and in erecting at the west side of Prince's Dock a handsome railway station, with lines connected with the Dock Railway and the great inland systems, so that passengers by the liners may, as at Holyhead, step from the ship's deck into the railway station, saving time and the trouble of transfer to tender on their home journey.

CHAPTER XIV.

THE SETTLE AND CARLISLE TRACK.

A Remote Country-Side—By Rail to Bolsover and Hardwick—A Business Woman—An Old Coaching-Town—"Screeching Fiends" Called Locomotives—Railway Enterprise at Chesterfield—the Dore and Chinley Line—The Midland at Sheffield—Whither the Track Stretches—A Central Station for Sheffield—The Line through Yorkshire—Leeds and Bradford—Saltire in Prosperity and in Adversity—On the Way to Carlisle—A Costly Grasp at Scotch Traffic—Struggling through Moorland—Snowed Up—A House on Wheels—The Navy's Town on the Moss—Viaduct and Tunnel in a Wild Land—An Awkward Condition—A Big Carrier.

THE Midland, with the object of striking more directly into the north-east Derbyshire coalfield, and also opening up a picturesque and little-known corner of the county, have constructed a branch styled the Doe Lea Branch, that connects Chesterfield, Staveley, and Mansfield. The line, which is seven miles long, traverses the valley along which the Doe Lea brook winds; it cuts through some valuable coal seams, and passes under the village of Rowthorn by a tunnel half a mile long, on its way to join the Teversall and Pleasley branch. The railway is an unpretentious one, and only runs three trains daily; but they go through a district capable of vast development because of its mineral wealth and a country that is picturesque in an altogether different way from the rocks and clefts and bluff hills of the Peak, except at Cresswell, not far away, where the strata breaks into crags just to remind one of

the more prodigal geological freaks by the Wye- and the Derwent-side. With this exception the country is pasture, park, and woodland, and in the places where it has not been blurred by shale-heaps and pit-gearing is



HARDWICK HALL.

almost as lovely now as it was in the days when the minstrels sang of the beauteous Vale of Scarsdale.

There are two stations on the line that lead to the prettiest parts of the locality—Bolsover and the station with the double-barrelled name of Rowthorn-and-Hardwick. For years, until this line crept to the bottom of the steep on which it stands, Bolsover was practically out of the world. The carrier's cart toiled to it up Hady Hill and Calow from Chesterfield Market; and blind John Whittaker, led by his dog, was the pedestrian parcel postman and newsvendor between the town noted for its fine church with the twisted steeple and the ancient village that years ago witnessed the swagger of the Norman warrior, and was

famous for its manufacture of buckles and spurs, and watched with some concern the resistance of the Royalists, who, from their rough stone sentry-boxes, still to be seen on the hill-side, and from the bastions of the lofty castle, strove in vain to withstand the stubborn valour of Cromwell's soldiers. Bolsover, with its Norman fortress, its ruined ivy-clad mansion in which the Marquis of Newcastle entertained Charles I., and its huge bailey wall, along which a carriage and pair might be driven, is still a quaint place, but it is rapidly losing its old characteristics. Its market-place and straggling streets are trodden by pitman and navy. There is railway-making and delving for coal on the borders of the ancient town, and the old-world place, that seemed ten years ago to blink sleepily at modern striving, has suddenly aroused itself and plunged into earnest industrial effort.

Hardwick, the Duke of Devonshire's East Derbyshire place, two miles away, retains the quietude of life that Bolsover is losing. It has not such a flavour of antiquity; but there is restfulness and beauty about the great park, nearly as famous as the Dukeries for its giant oaks; and the hall is one of the finest Elizabethan mansions in the country. It is of noble proportions, and has a façade two hundred and eighty feet long, and so well windowed that the house is locally known as "Hardwick Hall—more glass than wall." It is filled with rare furniture, rich tapestry, and fine paintings; but it is even more interesting because of the striking qualities of its builder, Bess of Hardwick. If she had

lived in this century she would have rivalled Thomas Brassey the contractor, or Arroll the Forth Bridge builder, or the most modern railway maker. She is described as an amazing shrew, an intriguer at Queen Elizabeth's Court, and four times a bride; but she was conspicuously a business woman. She was a money-lender, a lead merchant, and a master builder. She erected three great houses in Derbyshire; yet with all her native shrewdness and experience of the world was so superstitious that she became a prey to a gipsy's prophecy. One of the Zingari, looking gravely at the lines on her hand, told her that she would never die so long as she continued building. The active, restless, ambitious woman, who was too busy to be interrupted by death, believed the gipsy's story and built Chatsworth (the old house), Owlcotes, and Hardwick; but when the finishing touches were being put to the latter house the masons were checked by the wintry weather—there was a break in Bess of Hardwick's building; and a parchment roll states: "1607. The old Countess of Shrewsbury died about Candlemas—a great frost this year."

Chesterfield, in years gone by, was one of the most important coaching towns in the Midlands. The London mail ran through its old market-place at two o'clock in the morning, and other coaches swung along its streets to Leeds, to Manchester, to Birmingham, and to the Swan-with-Two-Necks in London. Until what is still styled the new line to Sheffield was opened on February 1, 1870, a stage-coach ran from Chesterfield

to the cutlery-making town; and Scott, the driver, the last of the noted whips of the locality, relinquished his cheery task with many regrets. It is curious that Chesterfield, where so many coaches used to make a temporary stay, promises at last to become a railway centre. The town has many railway associations. It contains the mortal remains of George Stephenson. Mrs. Rose, his brother's daughter, who watched the construction of the "Rocket" and saw it make its first journey, lived for some years in Chesterfield; and the town was made notorious in 1880 by the spurious Ruskin letter on railways, in which the art critic was made to say: "I have heard of Chesterfield. Hath it not a steeple abomination? and is it not the home, if not the cradle, of that arch-abomination creator 'Stephenson?' To him we are indebted for the screeching, howling, and shrieking fiends fit only for pandemonium, called locomotives, that disfigure the holiest spots of God's own land. I will not come to Chesterfield."

The sentiments in the letter—which Mr. Ruskin thought must have been the work of some waggish pupil—were not altogether alien to his own, and he declined to visit the town. The railway companies since then have, perhaps to show that they were impervious to this tirade, paid Chesterfield considerable attention. The monopoly the Midland Railway Company have so long enjoyed is breaking down. The tradesmen, restive under the traffic charges, particularly to Manchester and London, begin to feel the beneficial


influence of competition, and are promised two or three routes out of the town, whereas for half a century there has been practically only one. The Manchester, Sheffield and Lincolnshire Railway, as part of its scheme for the proposed line through Annesley, Nottingham and Leicester to London, have already made a railway, practically from Sheffield to Chesterfield, and placed a commodious station in the Brewery Meadows of the latter town.* The Lancashire, Derbyshire and East Coast Railway Company, the preamble of whose Bill was proved in the session of 1891, are now constructing a line right away from the authorised harbour and dock at Sutton-on-Sea, through Lincoln, Chesterfield, Buxton, Macclesfield, to Warrington, with an outlet to the Manchester Ship Canal, and also with branches earlier in the track, to Sheffield and Manchester. The line, which is estimated to cost five millions, is striking through a country altogether untouched in many parts by railway enterprise; but its chief object is to tap the mineral wealth of the Midlands, and its principal inland station will probably be at Chesterfield, which stands on a coalfield that has already an output of seventeen million tons per year.

The Midland line north passes over a lofty viaduct at the mining village of Unston, and beyond Dronfield enters the Bradway Tunnel, which was dug through the millstone grit, and gave great trouble in making

* The line has now been tunnelled beneath Chesterfield, and extended to Heath, a village that was noted in "the days of the coaches" for its Elm Tree Inn.

owing to the influx of water. A little further on, the Dore and Chinley Railway quits the main line to the westward, and strikes by tunnel and through moorland into the heart of the Peak, and on to Manchester. The line, which enters into competition with the Manchester, Sheffield and Lincolnshire Railway from Sheffield to Manchester, pierces a very rugged country, and the work, now completed, has been very heavy. In the past no one would have dreamed, unless he desired to kill time, of travelling from Sheffield to Manchester by the Midland, for he would have had to journey by Chesterfield and Ambergate, southward; then change trains, and travel north-westward by Matlock and Peak Forest. The loss of traffic to the company and the annoyance to the trader were considerable, for the Manchester, Sheffield and Lincolnshire Railway Company had practically a monopoly of the carrying-trade between the two cities in conjunction with the Great Northern, and did not always succeed in pleasing their customers.

The railway distance from Sheffield to Manchester by the Manchester, Sheffield and Lincolnshire line is forty-one miles; the distance by the Dore and Chinley track of the Midland is just forty-one and a quarter miles. But the Midland anticipated that with a better laid line and a quicker train-speed they would be able, so far as time is concerned, to place Sheffield nearer Manchester than their rival. The line also brings Buxton in closer touch with the Hallamshire capital, and gives the workers amid the smoke of furnace



and the din and clatter of steel-plate easier access to many a pretty Derbyshire valley. The project originated with a number of Sheffield manufacturers, but the Midland, finding competition creeping in on all sides, undertook to absorb the scheme in their system and to construct the line, although the estimated cost was one million sterling.

The new railway, which was opened for goods traffic on the 6th November, 1893, and for passenger traffic on the 1st June, 1894, commences with a double junction near Dore and Totley, on the main line of the Midland, goes along the Sheaf Valley, through the Totley Tunnel, emerges at Padley, skirts Derwent Valley, serves Hathersage and Bamford, crosses the river Derwent, keeps by the Noe brook to Hope, enters Edale, and then makes its way under Cowburn, through another tunnel joining the Midland line from Derby to Manchester at Chinley, traversing, after it emerges from the breast of the Totley moorland, a most delightful tract of country hitherto accessible only by coach, bicycle, and a good pair of legs.

The main line of the Midland, penetrating a tunnel through the Duke of Norfolk's land, enters Sheffield station, which is built on three arches over the river Sheaf. It seems strange, when one notes the amount of traffic through this station and endeavours to gauge the great bulk of manufactured goods, from the tiniest knives to the biggest armour-plates, sent out from the local workshops every year, that as recently as 1864 a town meeting was held to urge the Midland Railway

Company to place Sheffield on the main line. After much deliberation the directorate decided to make the line from Chesterfield, and passengers north and south had no further need to kick up their heels with impatience at Masborough in order to get to Sheffield.

The old passenger station in the Wicker was converted into a goods depôt, and the great warehouses that have sprung up on the site prove that the company acted wisely in listening to Sheffield's plea. By the Midland the town has now direct communication with St. Pancras ; with Birmingham, Bristol, Bath, and Swansea on the west ; with many places in the south ; with the Lincolnshire sea-coast by the new line to Bourne and the recent acquisition of the Eastern and Midlands Railway* ; with York, with Leeds, Bradford, Settle, Morecambe, Carlisle, and Scotland ; and by the Dore and Chinley track it has got speedy transit for its goods to Stockport, Manchester, and Liverpool. By the Sheffield Railway it is connected with Manchester and Liverpool on the west, and with Grimsby, with access to Hull, on the east ; it has by the Great Northern an alternative route to London, and will soon have a third track to town. But with regard to passenger convenience and travelling facility Sheffield has still much to desire. The Midland Station is

* The Midland and the Great Northern have now completed the purchase of the Eastern and Midland Railway for more than one million of money. The line, which is 114 miles long, gives access from Lynn to Norwich, Cromer, and Yarmouth.



tolerably commodious and well equipped, but it is rather out of the way, at the bottom of a hill, removed from the business part of the town; and the Victoria Station of the Manchester, Sheffield and Lincolnshire Company bordering the Wicker and looking down on the town from Station Road is too remote from the High Street, and a dismal place withal, inconvenient and gloomy. Sheffield, like Manchester, suffers from railway piecemeal.

There is nothing more tantalising in modern travelling than to run down from London by the Great Northern to London Road Station in Manchester, with a wife, children, and three or four boxes, on your way to some West Coast watering-place, to find that you have reached a terminus, and have to drive across the city, through the bustle of Market Street, to the Exchange Station or the Victoria. The cost, the loss of time, the anxiety lest you should miss your train, and the trouble, take a good deal of happiness out of life, and the grumbling is so incessant that the time must come, as we have said, when Manchester will have a central station focussing all the lines of all the companies, from north, south, east, and west. Sheffield, in a lesser degree, has a similar grievance. It seems rather foolish that a passenger travelling from Manchester, by Penistone, and desiring to go south on the Midland track, should be obliged to break his railway journey at Sheffield, and to take a cab or walk a quarter of a mile from the Victoria to the Midland Station. What Sheffield needs is a central station; and there is

no reason why the lines of the two—or of more companies if they come, as promised—should not be brought nearer the heart of the town, and the central station erected, say, on the land lying between Fitzalan



SALTAIRE. (Page 285.)

(From a Photograph by Appleton & Co., Bradford.)

Square and Station Road, with a graceful architectural frontage, nearly opposite the Post Office; for this is, undoubtedly, the best site still available, and nearest to the chief thoroughfares, High Street and Fargate.

The Midland serves Doncaster on the east, and Barnsley on the west. The former place is noted not only for its butter-scotch and its racing, but as the industrial headquarters of the Great Northern Railway

Company ; and the latter town has a reputation for its dialect, its chops, and its coal. Both have within recent years claimed considerable railway attention, Doncaster chiefly on account of its enormous special traffic to the St. Leger and "the Cup," and Barnsley because of the rapid development of its coal trade. At one time Barnsley was wretchedly served. The old station, which belonged to Lancashire and Yorkshire and South Yorkshire Companies, "consisted of two rooms ; one twenty feet square, which did duty for the booking offices of three railways, for a spice stall, and sale of the daily papers. The other, by a very gross abuse of language called 'a ladies' waiting-room,' was so small that one lady of moderate dimensions would occupy a very considerable portion of it." The Midland peeps into both stations at Wakefield, the little city that is proud of its modern acquisition of a real live bishop, and eager to regain the industrial and commercial activity that pulsed in it years ago, when the great mills, some of them now deserted, were bustling with toil. The railway gathers up many lines from all quarters at Normanton, one of the great traffic centres of the north, familiar to passengers by the mail owing to its wakefulness at midnight, when, mingled with the rush of the express and the ringing of bells and the noise of shunting and the cries of porters, the calm, polite guard comes to the carriage door and quietly intimates that there is a ten minutes' wait if you would like a bowl of soup, ready on the marble-topped counter of the daintily-appointed refreshment-room, that

you can see all brilliant with light just across the platform.

It is only a short run from Normanton to Leeds, the great thriving town with many trades, that has become the industrial capital of Yorkshire, and, equally with Sheffield, deserved the dignity of being made a city.* Leeds is content to let York revel in historic memories and past greatness. She believes in the earnest work of the present. She is ever seeking new modes of employment, and is determined to be no laggard in the march of progress. The town, with its population of 375,000, has shown marvellous growth since "the old cloth market was first held on the bridge over the Aire, and the refreshment given the clothiers by the innkeepers was a pot of ale, a noggin of porridge, and a trencher of boiled or roast beef." It is almost daily adding to the variety of its manufactures, while maintaining its position as a great cloth mart, though the old Cloth Hall has been demolished, and the historic site of buying and selling usurped by the new post-office. Leeds sends out yearly an enormous quantity of leather, boots, caps, ready-made clothing, cloth in bulk, light and heavy machinery; and in the works of Kitson & Son possesses one of the largest and most

* Both Leeds and Sheffield had the honour conferred upon them in 1893. On February 6th, in that year, Mr. Herbert Gladstone, M.P., telegraphed to the Mayor of Leeds: "Have much pleasure in informing you that her Majesty has assented to the petition of the Corporation that Leeds should be a city." The same day Mr. A. J. Mundella, M.P., telegraphed to the Mayor of Sheffield: "I have the honour to inform you that the Queen has been graciously pleased to confer upon Sheffield the status and dignity of a city. Tender to you and your fellow-citizens my hearty congratulations."

interesting locomotive-building shops in the world. It has an excellent railway service, perhaps with the exception of the night service to Manchester; and its many lines that concentrate in or near the New Station give an outlet by the London and North-Western, the North-Eastern, and the Midland to all parts of the country; nor are the Great Northern likely always to stop short at the dark old-fashioned terminus down the road still called by a name that the growth of Leeds has made inapplicable, the Central Station.

From Leeds the Midland makes its way to Otley, Ilkley, and by its new line to Skipton, giving access to the picturesque district of Wharfedale and the charming solitudes of Bolton Woods; but what is more important from a commercial point of view, it provides Bradford, the great woollen centre, with facilities for getting its merchandise into the market, and has done much to assist the town in its trade development. Bradford has passed through several acute trade crises during the last two decades, and has been sharply pinched by the operation of the McKinley tariff, suffering, like Sheffield, a serious diminution in its exports; but the place has considerable vitality, and will, no doubt, survive the latest blow to its trade. The railway companies appear to have faith in Bradford. The Great Northern have turned Victoria Hotel inside out, and fitted it luxuriously enough for a sybarite, in the hope, cherished by Sir Henry Oakley, that it will prove a resting-place for travellers from the Continent and all large towns doing business with Bradford.

The Midland have demolished the old passenger station, and erected between the existing passenger station and the bonding stores a new goods warehouse, a gigantic building, the floors of which are calculated to hold 40,000 tons of goods.

The model town of Saltaire is known by travellers from every land; merchants of all climes have visited it, wondered at its rapid growth, and admired not only its great stone-built mills and compact clean-looking houses, but the principles on which the hive of industry is governed, socially as well as commercially. It is not widely known, however, that Saltaire had a very narrow escape of being built far enough away from Shipley. With his mind filled with the project for the manufacture of a new material, Mr. Salt went to Chesterfield, intending to place his colony there, and bargained for the land now occupied by the new station of the Manchester, Sheffield and Lincolnshire Railway; but his offer was rejected, and failing to get a tract for his new town in Derbyshire, he went over the border into Mid-Yorkshire—still clinging to the Midland Railway side. The founder of Sir Titus Salt and Company, alpaca makers, worsted spinners, and plush manufacturers, was a trade pioneer and social reformer of the highest type; and it came as a painful shock to many when it was made known in the autumn of 1892 that the great firm he had created were obliged, owing to the altered conditions of trade and the fierceness of competition, to gravely consider a proposal to wind-up the business which had for years given so much profitable

employment and enabled so many comfortable homes to be established.*

By Keighley and Skipton Junction, through the moors of West Yorkshire, the line goes, forking at



SIR TITUS SALT.

Settle Junction. The left prong curves away over the sturdy timber viaduct at Clapham, and by mist-capped Ingleborough, weird as the mountain through which the Pied Piper of Hamelin disappeared, until it crosses the iron bridge over the Lune, and enters Lancaster, from which ancient town it reaches Morecambe, beloved of the excursionist, deviating to

the thriving seaport and home of shipbuilding, Barrow, which practically owes its life to railway enterprise, and has become one of the chief highways and waterways for the mass of tourists who forsake work for one week at least every summer to run across to the Isle of Man or to Ireland. The line from Carnforth belongs to the Furness Railway Company, though it seems to be chiefly

* The undertaking has since been acquired by a syndicate with the intention of continuing and developing the business.

occupied by Midland rolling-stock. It is a line that required considerable engineering skill and persistence in the making, and is conspicuous for its long track running with graceful bend through the sea. But, after all, the north fork of the Midland from Settle is the most romantic piece of railway work that has taxed the ingenuity of the engineer and the contractor, the endurance of the navy, and the patience of the railway shareholder.

The Midland, determined to get a share of the Scotch traffic, which even in 1860 was valued at a million and a-half per year, obtained sanction, in spite of the opposition of the London and North-Western, to the construction of the line from Settle to Carlisle: and certainly there was ample justification for the track, judging from Sir James Allport's evidence. "It is a very rare thing," he said, "for me to go down to Carlisle without being turned out twice. I have seen twelve or fifteen passengers turned out at Ingleton, and the same number at Tebay. Then, although some of the largest towns in England are upon the Midland system, there is no through carriage to Edinburgh, unless we have a family going down, and then we make a special arrangement and apply for a special carriage to go through. I have been by a fast train from Derby to Ingleton, and then been attached to a train with six or eight coal trucks to be carried on to Tebay." And the difficulty and delay in delivering goods in Scotland from the Midlands was almost grotesque.

When power had been secured to construct the

eighty miles of railway between the two places, the company rather shrank from the enormous cost, and with the prospect of getting a route to Scotland by favour of the London and North-Western over the Lancaster and Carlisle Railway, decided to abandon the project, and flattered themselves that they had saved two millions of money. But Parliament, weighing chiefly the opposition of the Lancashire and Yorkshire Railway Company, who eagerly desired an independent route northward, and urged that the Settle and Carlisle line was absolutely necessary, declined to agree to the arrangement, and the Midland Company were practically obliged to go on with the great undertaking.

The first sod of the new line was cut at the end of 1869. The railway was opened for goods traffic in August, 1875. Midland Railway shareholders, accustomed to attend the half-yearly meetings of proprietors at Derby, will no doubt recall the ebb and flow of interest in the line. The drain of gold for its construction was so large and unceasing that one shareholder hazarded the guess that the company must be filling up the Blea Moor Tunnel with it. There were now and then alarmed inquiries as to the probable total cost of the work, hints of engineering triumphs, records of stern fights with the snow and frost amid the desolate hills, and stories of the courage and daring of the men engaged upon the building of the railway; but month after month went by, and the line seemed to creep over the moorland and beneath the hills so slowly that the subject became almost wearisome to the

majority of scripholders, though Mr. Hadley retained an irritating interest in it, sometimes twitting the directors with having lost their way in the wilds above



SETTLE.

Settle, and with having gone heedlessly into an enormous expenditure that would beggar every man who had been foolish enough to put his money into Midland scrip. The country certainly was wild enough. The local farmer was scarcely indulging in exaggeration when he said: "There is not a level piece of ground to build a house upon all the way between Settle and Carlisle."

By Hellifield, and Settle, to Hawes Junction, then forward by Kirkby Stephen and Appleby, and nursing the courses of the river Lowther and the river Eden, the line makes its way along moss and bog, and moorland and hill-country, right

away to Carlisle. Sharland, a young engineer, walked the track in ten days, taking levels, making the mountain sheep scamper away in affright, and hearing scarcely any sound in this wilderness except the crow of the moorcock and the voice of the wind. But the solitude was soon broken, for not long after his adventurous walk by cleft and chasm and up steep hill, scores of navvies were busy on the line. The big fight with Nature was on Blea Moor, a desolate tract, tangled with rushes and trailing weeds and heather, through which the sheepwalks still wind their narrow, erratic way.

The weather, as well as the land, was execrable. When rain fell it always pelted down in torrents; the snow swirled in thick, blinding masses; the cold was intense. When Sharland began to stake out the line he was snowed up. Rising one morning, eager to resume his task, he found the little inn at which he was staying on the moor only half-lighted. Snow had fallen all about it and drifted as high as the windows. Beyond lay an impassable world of white, over which the wind howled fiercely, tossing the great flakes hither and thither. The storm lasted for three weeks. Snow fell during the whole of this period. The cottage was practically buried in it, for the snow was banked by the wind higher than the top of the front door. For nearly a fortnight the occupants were close prisoners. They had to depend for sustenance on the homely and not too abundant fare that had been stored in the tavern, and finally they were obliged to turn out and tunnel

a road through the snow to get drinking-water at the horse-trough.

So wild was the country, and so devoid of habitation, that the contractors fitted up a house on wheels—a conveyance not unlike a showman's van—in which they lived near the Ingleton highway. The rough ground and the yielding peat made progress difficult; and when it was decided to peg down some strong tents near the mouth of the proposed tunnel, the canvas, poles, ropes, and pulleys had to be conveyed on donkeys' backs. A special vehicle was even made for the transit of necessaries to the men. An ordinary wheeled waggon was useless in such an uneven district, so the morass cart was devised. It was a primitive-looking vehicle—a great trundling barrel, revolving on its own axle, but at the same time balancing the body of a light cart. Filled with food, clothing, great flagons of ale, and supplies of tobacco, and building material, it rolled and jolted over the rough way, generally, though not always, without sinking. Nevertheless, one of the contractors said he often saw “three horses in a row pulling at that concern over the moss till they sank up to their middle, and had to be drawn out one at a time by their neck to save their lives.”


Anyhow, a town sprang up in this wild land, no fewer than 2,000 navvies being soon colonised on the moor about Batty Green. The place was christened Batty's Wife, the navvies having faith in the legend that some reckless woman of that name drowned herself hereabouts owing to her husband's neglect and wicked

ways. Rows of rough dwellings were erected, shops were opened, and streets trodden into use. Here there was a post-office, through which passed the strangest caligraphy that ever perplexed Postmaster-General; there stood a hospital, containing stalwart, herculean patients, who now and then had to be held down, so difficult was it to convince these strong fellows that they had been injured or were seriously ill. Except for the fact that there was no revolver practice, the town of Batty's Wife seemed more like a mining village out West than a railway hamlet in England, which possessed a public library, a mission-house, and schools; though it must be confessed that these aids to religion and culture did not always have the effect of maintaining peace, for there were occasionally, possibly to keep the navvy's blood in circulation in his enforced or voluntary leisure, some determined rough-and-tumble fights.

Within shadow of the great hill of Blea Moor and the loftier shoulders of Whernside the town did not really get much shelter; and at times the wind rioted in Ingleton Vale so fiercely that it was necessary to stop work lest the men should be blown off the scaffolding. Viaduct, embankment, cutting, and tunnel were made, however. The work proceeded slowly but surely. The Batty Moss Viaduct, striding across the watershed of the river Ribble, gradually assumed shape, and is considered one of the most substantial railway works in the country, with its foundations sunk deeply through the peat to the rock, with its great strong piers,

and its twenty-four arches, in the building of which a million and a-half of bricks were used. The cutting was resolutely extended through the millstone grit and black marble to the tunnel which pierces the mountain. The underground way, with its walls of grim crag and "its blackness of darkness," is 2,600 yards long and 400 yards from the southern entrance, and its summit level is 1,150 feet above the sea, which is said to be the greatest elevation of any railway in England except the Tebay and Darlington branch of the North Eastern, which rises to a height of over 1,300 feet above the sea-level.

The track northward is a sterling tribute to the indomitable perseverance of the engineers and the long suffering of the Midland shareholders. It is practically a railway on viaducts. Just beyond the tunnel is Dent Head Viaduct, 200 yards long and 100 feet above the roadway; then follow Arten Gill Viaduct, 660 feet long and 117 feet above the water; the Deep Gill, half bridge half culvert, and Smardale, which is 710 feet long, 130 feet from the stream, and one of the loftiest viaducts on the Midland system. No fewer than 60,000 tons of stone were used in the construction of the Smardale Viaduct alone, and the huge fabric of grey limestone, that stretches its graceful length across Scandal Beck, occupied four and a-half years in building. Other notable operations on the line were the making of Black Moss Tunnel and the formation of the Intake Embankment, which is 100 feet high and of prodigious bulk. On one contract there were no fewer



than forty-seven cuttings, five viaducts half a mile long, four tunnels a mile long, sixty-eight road bridges, and one hundred culverts.

The line was dug, drilled, built, and blasted through a strange variety of country, and nearly every kind of strata was met with — clay, gritstone, marble, flint, and granite. In constructing it the men came across the remnant of an old tramway actually buried in the boulder clay, and made acquaintance with Wild Boar Fell, on the rough shoulders of which tradition says the last wild boar was killed; they met with a hundred strange freaks of Nature in this rugged land—curious clefts, perilous chasms, singular caverns, and subterranean streams. Nor was the line carried through to the central station at Carlisle without encounters with curious types of character; for instance, the company were compelled by a game-preserving landlord at Blea Moor to place their telegraph wires underground, so that they might not harm the flying grouse in time of snow; and near the village of Newbiggin another proprietor exacted a sardonic condition. He was willing that the railway should cut through his wood if the devastators would spare the largest and finest oak, and when asked why he needed this particular tree he replied, “It’s to hang you and all the Midland Railway engineers for daring to come here at all.”

The Midland, as is indicated in other chapters of this work, have extended and improved their system in many directions without further fear of hangman’s touch; but John Ellis, of Leicester, when he invited

George Stephenson to the memorable beefsteak dinner, and the capitalists who decided at the wayside inn at Eastwood to make a line forthwith from Pinxton to Leicester, little dreamt how far that humble track would extend—that it would become the largest coal-carrier to town, take on journeys, long or short, nearly fifty million passengers a year, and become the pioneer of English railways in all that relates to the cheapness and comfort of travel.

CHAPTER XV.

THE GREAT NORTHERN.

A Powerful Company in a Fertile Land—King's Cross—How the Terminus Obtained its Name—Trudging on the Highway—Nature and Extent of Great Northern Traffic—The Season-Ticket Holder and his Ways—By Express to York—In the Brake Van of the "Flying Scotsman"—Pillows for Passengers—Two Notable Events—A Fast Run to Town—Doncaster on the St. Leger Day—A Crowd of Trains and a Mass of People—How the Multitude are Conveyed Home Again—Some Racing Memories—Where the Great Northern Engines are Built—London's Milk Supply—Old Railway Enmity—Fighting the Midland—The Sheffield Company and the Great Northern—A New Agreement—The Eve of Another Conflict.

THE Great Northern are a powerful company. The thick red line on the map, showing the East Coast express route between England and Scotland, is indicative of marvellous railway enterprise, for it takes you right away from London to Peterborough, Doncaster, York, Darlington, Newcastle, Edinburgh, Perth, Aberdeen, and Inverness; and branching from this great trunk are scores of the company's own tracks and of connections that serve London and the suburbs, that spread over the eastern counties and Yorkshire, that penetrate into Wales, that strike into the heart of the Midland system at Derby and across the country westward to Manchester and Liverpool. Like the Midland, the Great Northern lines go through a fertile and picturesque land. They gleam in many a beauteous vale, and skirt many a time-worn cathedral,

ruined castle, and historic house. They stretch nearly 1,000 miles in their own right; and in combination with the North-Eastern and the North British the



DEMOLISHING KING'S CROSS.

Company have a total traversing ground of 3,500 miles. They have made enormous strides since they became, as "Bradshaw's Railway Manual" tersely puts it, "an amalgamation of the London and York Direct Northern, incorporated by the Act of June 26, 1846, for the construction of a line from London to York, viâ Peterborough, Newark, and Retford, with a loop-line from Peterborough, through Boston and Lincoln, rejoining the main line at Retford."

"If anyone wants to appreciate the engineering

progress made in a single generation he can hardly do better," writes Mr. Acworth, "than compare the roof of King's Cross Station, which, in its day—only some forty years since—was the largest in the world, with that of the adjoining St. Pancras terminus. But the King's Cross roof has now lost the special interest that formerly attached to it. Its girders were formerly of wood, being composed, one might say, of bundles of planks fastened together and overlapping each other lengthways, then bent round and forced by sheer pressure to assume the shape of a bow. The design was borrowed from the Czar's riding-school at Moscow. There was, however, one obvious objection, that the planks, like a bow when stretched, always strove to re-straighten themselves, and so exerted a powerful thrust on the outside walls. The west wall was safe enough, for it had the whole range of offices built along it to hold it upright; but the east side, even in spite of its flying buttresses, showed signs of being shaky at an early period, and as long ago as 1869 the span of roof over the arrival platforms was reconstructed with iron girders. In the course of the years 1886-7 the whole roof, 800 feet in length and ninety-one feet in height, was successfully renewed."

King's Cross is said to have obtained its name from a statue of George IV. which stood years ago at the junction of the six roads. One prefers to believe, however, that the locality was associated with a cross centuries before any statue was raised to the pleasure-loving king. Prayer and fight, sanctity and tussle of

war, had the cross for an emblem and memory in olden time. The Gothic cross, standing amid the rush of modern life, at Charing Cross Station, takes the mind back to the more ancient cross erected on the site in Queen Eleanor's memory; Holywell Cross is the name given to hallowed spots in many an English village; and Banner Cross in Yorkshire tells of war-cry and the flash and thud of battle-axe.

And a cross was reared on high,
To their name in after-years,
Where in death the heroes lie,
Banner Cross the name it bears.

Queen's Cross would, perhaps, have been a more appropriate name for the Great Northern terminus, for close by, if "the perils of the historian" have not driven him from the truth, Queen Boadicea was defeated by the Roman soldiery.

The surging crowd about the station to-day is bent on the more profitable and agreeable purpose of business or recreation. The spirit of conquest is still strong in the land; but it is devoted rather to the grasp of trade and the mastery of science than the doubling-up of the foe. There is an English proverb that "a woman and her babe might walk scathless from sea to sea in Eadwine's Day;" but she could do it with greater security now—or, better still, take the journey by rail, quickly and in comfort, without exhausting her little one, or harassing herself with toilsome progress along the highway, even though, as in years gone by, "the springs by the roadside were

marked with stakes, and a cup of brass set beside each for the traveller's refreshment." Lord Colville says the line serves a large and almost purely agricultural district; a former chairman was fond of asserting that the company were prepared "to carry anything, from the Queen to a blackbeetle." Both statements are correct. While the company do a great traffic in agricultural and dairy produce, they carry much coal and general merchandise; and half-an-hour's stroll about King's Cross or Finsbury Park Station, "the avenue for an immense traffic, some seven hundred trains daily traversing its numerous iron ways," soon reveals the fact that the Great Northern have got their share of passenger-traffic too.

Time often falsifies the doubts and fears of men. Fifty years ago George Hudson, irritated at the sanction of the Great Northern project, said: "I fear the public safety is deeply involved in passing the station at York, and in the interference with our traffic." Yet the Great Northern, with their carefully-constructed rolling-stock, and engines that are both speedy and trustworthy, have increased rather than imperilled public safety in travel. Nor have the Midland Railway Company been ruined by the aggressive policy of their old enemy. The tussle in Committee-room and on track has undoubtedly benefited both systems; and the Great Northern, fighting their way with dogged resolution, have become strong and sturdy indeed, as capable of carrying as Atlas, and as swift in running as Arion, the chariot-horse of Neptune.

The railway, which practically struggled out of the ruck of the railway mania, out of the thousand wild projects that were backed with seven hundred millions of capital, on paper, has become one of the most noted and most useful of our home undertakings. The company possess a capital of £47,000,000, they carry 14,000,000 passengers a year, and their yearly receipts amount to about £4,000,000. Nor, judging from the passenger traffic in the year 1893, is the business of the company shrinking; for their gross revenue from this source (excluding season tickets) was £1,303,322, against £1,301,722 in 1892.*

One of the most gratifying developments of modern railway traffic is the steady increase in season-ticket travelling, in the number of regular customers on the line. Nearly all the front-rank companies have "established a good connection" in this direction; and the Great Northern continue among the number, though they gave their season-ticket holders an unpleasant shock in the spring of 1892. Burning with zeal to protect the shareholders from unscrupulous travellers, they managed to raise a storm of indignation. They sent out a form to the effect that unless a season-ticket holder could produce his ticket, he must immediately pay the ordinary single fare, that the fare would not be returned though the ticket were afterwards

* At the August meeting in 1893 reference was made to the effect of the phenomenal summer on the railway traffic. The extraordinary heat, lasting nearly four months, resulted in a serious reduction of coal consumption; but, on the other hand, the passenger traffic receipts were the best on record. People found house and city irksome in the perpetual sunshine, and the company carried nearly 625,000 more third-class passengers.

produced, and that if the passenger declined to pay the fare, the company would be at liberty to revoke the ticket. The regulation, though apparently designed to check impudent persons who were circumventing the company, put honest season-ticket holders in a fluster. It was really a marvellous cure for forgetfulness. The City man, hurrying out of his suburban home for his morning scramble into the train, would suddenly slap his pocket, go crimson in the face, speak emphatically to himself, and rush back for the forgotten ticket, which was hiding away perhaps in the vest pocket of his evening dress, worn the previous night at banquet, theatre, or ball.

The thing got beyond a farce. It became a nuisance. The London season-ticket holders protested so strongly that the company were unable to ignore their voice. Sir Henry Oakley, the general manager, found it discreet to say that the Great Northern were desirous to afford every accommodation in their power to passengers, and he suggested a meeting between officials of the company and a committee of season-ticket holders. The conference was held in March, 1892, and the company withdrew the condition that the fare must be paid absolutely though the season-ticket had been merely forgotten. But the chat with the general manager revealed the fact that travelling human nature is not immaculate—that, however active the brain, conscience slips in many a railway compartment. It was stated that the company had been systematically cheated. In one case a man split up

his ticket, and gave half to his wife, and they used the same pass. During the preceding year at Holloway there were 44,416 cases of people who had to pay excess fares for riding in superior classes to those for which they had taken tickets. A special staff of ticket-inspectors discovered 34,881 passengers travelling irregularly, from whom excess fares were collected at various parts of the line. At Holloway, in two months 8,000 passengers were found to be travelling irregularly, and 140 people were discovered travelling with third-class tickets in other carriages and refused to pay the excess fare.

Even seventy years ago a journey from London to York was a serious business. Passengers made their wills and bade tearful farewell to those they loved, with minds troubled meanwhile about footpads, robbery, and storm. Highwaymen got over the ground fast enough, and the English youth has yet a secret admiration for Dick Turpin and his wild ride to York. But the mercer and the goldsmith of the city travelling north for trade or friendship had an uncomfortable experience, and no doubt were thankful when the coaches, with their flavour of romance and aroma of sodden straw, went off the road, out-distanced by the locomotive. But the acceleration of speed of travel was not destined to depend simply on the change in the means of locomotion. The locomotive itself has amazingly quickened its pace; and on the Great Northern, which runs the fastest trains in England, the journey from London to York does not take four days—only three



hours and a-half. By the East Coast express route between England and Scotland, which the company claims is the shortest and quickest, you can leave London at night, sleep your way through the country and across the border, and breakfast in Edinburgh, 393 miles from King's Cross, next morning.

At what pace the journey is done is told in the chapter on train speeds in the second volume; but another writer, "A Traveller in the Brake-van" of the "Flying Scotsman," has vividly described how the guard does it, while the passengers are lying snugly in bed, or reading, dozing, smoking, or chatting in compartment. He explains that the guard has several hours' hard work before him when he leaves King's Cross; that he does not spend the whole of his time between stations in trying to keep himself warm among the luggage, but takes off his gold-braided cap and his coat, turns up his sleeves, and grapples with heaps of parcels and letters, which have to be checked by the way-bills and arranged for destination. "You get," he says, "a very good view from the brake-van. There is a comfortable recessed seat on each side, with small windows fore and aft, so to speak, which enable you to look along the track both ways. You see the whole length of the train curving sinuously in front and the brave engine snorting fire at the head. From this point of view it looks exactly like a great dragon of terrific strength and speed. Surely in the days to come men will see more of romance in the flying express than in the old stage-coach! The latter is as a toy or a

fairy-tale to please children ; the former has the strength and sternness of manhood—it is travelling grown-up. I notice that as daylight fades the growing dusk reveals the engine's fiery breath, invisible at other times. The cloud of smoke by day becomes a pillar of fire by night. But there is a great difference in engines—or, perhaps, in drivers. We have three between London and Newcastle, and each breathes quite differently : the first is all fire and sparks, the second dark and smoky ; while the third has a very bright, fierce snort, white just touched with flame.”

This writer goes on to speak of a peculiarity he has often observed on the Great Northern : the running is so smooth that at night on a straight bit of road the train seems repeatedly to be coming to a stop. And even in the van, the least steady part of the train, he had the same sensation.

The Great Northern have, on their long journeys by the East Coast route, many passengers inclining to comfort, and some of their wants might be gratified with profit to the company. In the summer of 1892 a passenger travelling second-class from King's Cross to Aberdeen desired, after the custom in France, to hire a pillow, but was told at the stationmaster's office that they drew the line at pillows, providing them only for passengers in sleeping berths. Hat-boxes, Gladstone bags, and tin trunks, jammed into the corners of the seats, do not make very easy resting-places for wearied heads ; and there is really no sensible reason why railway companies should not keep a stock of

pillows at their termini, and let them out at a small price per journey, on condition that the passengers, unlike the hero in "*Vice Versâ*," promise not to shy the bolsters at each other.

The year 1893 was notable for two events in English railway travelling—the introduction of third-class dining cars on the long-distance trains from London to Scotland, and the resolve of the Great Northern on the East Coast route, and of the London and North-Western on the West Coast route, to abolish second-class carriages, which had long been a drag on the dividend-earning capacity of the expresses to the north. The chairman of the Great Northern recently stated that they had been obliged to carry second-class passengers by the Scotch expresses because the West Coast companies did so; but he was glad to say the North-Western had given notice that they intended to discontinue the practice. The carriages were withdrawn on May 1, and now no second-class passengers are carried by any route between England and Scotland.

An impression prevails that the Great Northern only put the best leg foremost on the East Coast route, on their long stride to Scotland; but their expresses from Manchester to town are still faster, and, like the coyote, the swift-moving animal that kept ahead of Gilead Beck on the prairie in the story of "*The Golden Butterfly*," now and then outrun even the "*Flying Scotsman*." Mr. Brickwell, of the Great Northern staff, writes in a magazine: "The two o'clock

from London Road Station (Manchester) to King's Cross Station (London) is the fastest ordinary and daily train in the world. It should in fairness be



THE GREAT NORTHERN MAIL.

mentioned that the train is worked as far as Grantham by the Manchester, Sheffield and Lincolnshire Railway, but in consequence of that company's very difficult road, the speed does not average more than forty-eight and a-half miles an hour; while the last 105½ miles from Grantham to London by the Great Northern Railway engine are got over at a little over fifty-four miles an hour, the time taken being 117

minutes, including start and stop and reducing speed to fifteen miles an hour through Peterborough."

Nor do the trains lag on the line when quite another race is run—the St. Leger. During the race week in September, 1892, the Great Northern ran fifteen expresses daily from London to Doncaster, at a speed that rivalled the "Flying Scotsman's" pace, and on the day when *La Flèche* swept past the winning-post and the mention of Orme filled the backer's heart with grief, they ran an express excursion train from King's Cross, enabling those who desired to see the race to get to the Town Moor and back to London again for twelve shillings and sixpence—a run of 312 miles at a fraction under one halfpenny per mile. On this occasion the Manchester, Sheffield and Lincolnshire Railway Company issued the following handbill, which must have been tempting to all Lancashire men fond of racing:—

DONCASTER RACES

(By the Nearest and most Expeditious Route) IN ONE HOUR AND
THIRTY MINUTES.

On Wednesday (The ST. LEGER DAY), September 7th, 1892,

A SPECIAL EXPRESS TRAIN

WILL LEAVE

LONDON ROAD STATION, MANCHESTER, at 11.0 a.m.,

RUNNING DIRECT TO

D O N C A S T E R ,

And arriving there about 12.30 p.m.; and will return from Doncaster (Station Platform) at 5.20 p.m., reaching Manchester about 6.50 p.m.

FARE THERE AND BACK, 15s. FIRST CLASS.

There is always an enormous crowd at the St. Leger; and Mr. Francis Cockshott, the superintendent

of the Great Northern, has sent me a special traffic-sheet, showing how they get the mass of people on their way home again. The winner's shout of delight and the loser's curse of despair are scarcely expressed before the exodus begins. On the St. Leger Day in 1892 forty trains left the up-platform at Doncaster during the afternoon and night. These were chiefly fast ordinary or special express trains, and included the private special excursion train engaged by the Duke of Portland to convey his house party down to Worksop for Welbeck. No fewer than forty-three ordinary and special express trains quitted the down-platform. Then the excursion trains were many. Fifteen specials departed from the goods shed sidings, seventeen from the Shakespeare sidings, fourteen from St. James's Bridge sidings, forty from the locomotive sidings, two from Cherry Tree Station, one from Marsh Gate sidings, and a private special from the North Dock siding—no fewer than 173 trains altogether, many inconveniently and humorously crowded with human life, some of the compartments revealing such an amazing variety of struggling people and crushed hats, that quietly-disposed passengers preferred to seek refuge in the guard's van.

The railway company, having deposited the crowd on the sidings and platforms at Doncaster, consider that they have done their duty, and leave the huge, jostling mass of human life to find its way to the course anyhow. The task of conveying the people to the Town Moor would drive any general manager mad.

But something in this way is attempted in the south. The Great Western Railway Company modestly intimate that on each of the Ascot race-days special fast trains for Windsor will leave Paddington at convenient times, and that well-appointed omnibuses will be provided to convey passengers from Windsor Station to the course and back.

The Great Northern have thirty engine-sheds on their system; but the chief beat of industrial life is in the railway works at Doncaster. The old town, with its fine Mansion House and feasting Corporation, does not, to the stranger, appear to have very close association with the ding-dong of labour. The great crowd of eager people jostling on their way to the race—aristocratic owner, dapper trainer, shrewd jockey, wispy and knowing stable-help, bookmaker in gay garb, thimble-rigger in rags, tramping minstrel with burnt-cork smile and aching feet—do not imagine for a moment that Doncaster ever does any hard work. They look upon it as the home of northern racing. They can tell you how the fine old English folk of a century ago went to the St. Leger, how Lord Fitzwilliam drove to the course in his coach and six, and the Sheffield cutler trudged through the night, by Conisbrough Castle, on his long walk to the Town Moor. A few, perhaps, could tell you how the classic race was established, and take you to see the portrait of the founder in the nobleman's stand, gossiping meanwhile on Jack St. Leger's passion for play; on the Earl of Clermont's craze for wearing "a loose wrap-rascal coat, with a large hood over his

head, the populace mistaking him for the antiquated Princess Amelia ;” on the all-night sittings in the old-fashioned inns, like the Salutation, where every bench was occupied with wine-bibber or ale-drinker, strangely indifferent to the influence of Local Option, but restlessly anxious about the frying ham after hungry ride by coach or tramp from Mid-Yorkshire town. Certainly they could tell you how Robert the Devil stalked by the Red House through the quagmire made by the pelting rain. Every man, knowing somebody in Lord Somebody’s stables, or having read the words of Kettledrum, the sporting prophet, can infallibly give you, as a profound secret and a great favour, the name of the winner.

But unless you chat with some engine-fitter or steam-hammerman by the paddock, and learn incidentally that the works are closed “because it’s t’ Leger week,” you will leave Doncaster ignorant of the fact that the Great Northern have erected their principal works there—that in the great shops, sheds, and yards, occupying forty acres by the line-side, they employ near 4,000 hands in locomotive- and carriage-building and repair. Technical skill, manual dexterity, and the unwearied strength of gigantic machinery are here concentrated on the production of nearly everything needed for the railway ; and under the superintendence of Mr. Stirling, engine-building has become almost a fine art, so perfect in their parts, so easy in their movement, and so satisfactory in their speed are the locomotives turned out of the erecting-



THE GREAT NORTHERN WORKS AT DONCASTER (p. 312)
(From a Photograph by J. H. Thompson, Doncaster.)



shop, whether four-wheel coupled, mixed-traffic engine, or local passenger-engine that condenses its waste steam for work on the Metropolitan, or main line express-engine, with seven and a-half feet driving-wheel, like the powerful locomotive that in 1892 took the sporting train through from London to Nottingham without stopping, and though only allowed 150 minutes to run 126 miles, slowing at Peterborough, Grantham, and Colwich, arrived at its destination seven minutes under time.

Nothing could be more eloquent of the rapid growth of London than her milk supply. Awakening in the murky dawn, in the great city, and trying, with smarting eyes, to see beyond your bedroom window, walled in with saffron-and-ebony fog, you hear the sound of wheels, and then a voice, gruff or sweet, crying: "Milk, ho! Milk, ho! All fresh from the farm!" and you smile cynically. But it is possible to get milk in London; and the locomotive, brooking, according to the old anecdote, no opposition from the cow, does not disdain to carry her yield. Lord Colville told the Great Northern shareholders in 1892 that the milk traffic for London showed an increase of no fewer than 31,975 churns during the six months compared with the number sent in the first six months of the previous year; and at the next meeting of proprietors he reported that there was another satisfactory increase. The constant demand for milk in the household, especially by the British baby, both by day and night, and the urgent call for rum-and-milk

in the remarkable epidemics, mostly productive of thirst, that afflict our race, have put the milk traffic beyond the pale of agricultural depression; and it has become such a necessity to city life that the voices of the farmers and the dealers crying aloud against the new railway rates were the first heard by the directors, though some of them went so unaccountably deaf on this subject that, to quote the expressive words of a dairy farmer of the author's acquaintance: "You cud mak nowt on 'em. It wor abaht as much use talkin' at t' board, as they call it, as it is to shout at ahr owd grandad down t' speaking trumpet."

Derbyshire, as well as the counties served by the Great Northern, sends many churns to town. The liquids of the county have always found favour with Londoners. Isaak Walton drank ale in the Peak. Giving his hostess a fine trout he had caught in the Dove, he said: "Come, dress it presently, and get us whatever other meat the house will afford, and give us some of your best barley wine, the good liquor that our honest forefathers used to drink of; the drink which preserved their health, and made them live so long, and do so many good deeds." At the end of every season in town smart people go down to Buxton to drink the efficacious but unpalatable waters; and thousands of churns of Derbyshire milk are sent to St. Pancras every year, the dealers having faith in its wholesomeness and good-keeping qualities.

Railway honour in these days is generally to be depended upon. In fact, it is at times punctilious; for

“the traffic superintendent of one of the great companies recently consulted his brethren at the Clearing House whether he should agree to the proposal of a London theatre manager and issue return tickets, including admission to the theatre, at a reduced rate.” But twenty years ago there were in some railway minds comparatively few scruples about stealing a march over an opponent, or boldly trying to push him off the path. So keen became the competition between the Midland and the Great Northern for the coal traffic to London that the rates were altered to cope with every fresh development of the struggle. The two railway companies played at chess with the coal-owners; but the pawns wearied of the moves, got exceedingly obstinate, and would not shift. They declined to risk their capital, to sink shafts, to open out workings; and the bulk of coal for the London market shrank so quickly that the dwindling traffic-receipts were soon a source of concern.

Placed in a dilemma by their own foolishness the two companies sought refuge in the Coal Agreement of 1863, which set forth that the rates from the Yorkshire, Derbyshire and Leicestershire pits should “be equitably adjusted to each other.” For five years the rates agreed upon were charged, and gave tolerable satisfaction to the coal-owners; but the Great Northern were restive with regard to the coal rates from South Yorkshire, and pushed the Midland to arbitration on the point. Facts and figures were showered upon the arbitrator for sixteen months. They were so numerous

and so perplexing that they were calculated to drive any average professor of mathematics mad; but Sir John Karslake survived the ordeal, and, to the annoyance



THIRD CLASS TO SCOTLAND BY THE GREAT NORTHERN—AS IT
USED TO BE.

of the Great Northern, decided that the transit prices were fair, and that no alteration should be made in the rates for coal in the agreement.

The award was made in 1870; and Mr. Denison, the counsel for the Great Northern, coolly admitted, two years afterwards, that immediately the award was given they "began to look at the agreement and see whether they could drive a coach and six through it." They were apparently unable to find a gap big enough

for their purpose ; so they had recourse, like Major-General Stanley in the *Pirates of Penzance*, to strategy. They attacked the Midland on the flank ; they induced the Manchester, Sheffield and Lincolnshire Railway Company to send South Yorkshire coal for London customers to Retford instead of to Doncaster, the Retford rate being much lighter ; and they declined to make any adjustment of the rates, which were disturbed by this diversion of traffic. A fierce conflict followed, and it raged throughout 1871. The Great Northern reduced their through coal-rate from South Yorkshire to London by nearly one shilling per ton. The Midland did likewise. They checkmated the Great Northern in every move with astuteness and daring ; but it was a costly game for the shareholders, the companies losing some thousands per week. At last it was found that the Great Northern "were not in a condition to deal absolutely with their own rates," and the Midland, adopting an independent course, increased their coal-rates to town.

The Great Northern, forgetting their struggling days, when, on the authority of their then chairman, the system "ended in a ploughed field four miles north of Doncaster," disliked Sir Edward Watkin's latest project to carry the Sheffield Railway into London, and vigorously opposed the Bill, holding that the scheme was a violation of the traffic agreement entered into years previously by the two companies. But the exigencies of policy, and Sir Edward Watkin's

diplomacy, gradually altered their attitude, and at the meeting of shareholders in 1892 the Great Northern's opposition to the new line to London was practically withdrawn, and the seal of the company fixed to an agreement full of promise to both undertakings, and which Lord Colville trusted would be carried out. The new arrangement entirely supersedes the old fifty-year agreement, and "the Great Northern Company are to have full freedom of access, with their own trains and staff, over the railways belonging to the Manchester, Sheffield and Lincolnshire Company west of Retford; and the Manchester, Sheffield and Lincolnshire Company are to enjoy the like advantages over the railways of the Great Northern Company north of Doncaster; each of the companies to have the use of the stations of the other company, the right to fix its own rates and fares, the right to provide its own goods stations and staff on the lines of the other, and through booking of all classes of traffic, and all usual facilities for its interchange, as between friendly companies, are to be afforded by both; the Great Northern having further the option of becoming joint owners of the central passenger stations at Nottingham and Leicester."

The Great Northern have had a somewhat belligerent career almost ever since they fixed their original terminus in the York Road, near the ancient highway along which Dick Whittington passed; and they have not altogether done with fighting yet. They have had several narrow escapes of amalgamation, and are very likely in the end to amalgamate with the

North-Eastern, their natural ally ; but in the meantime they intend to enter vigorously into the new struggle for the London and Manchester traffic. They have running powers to Manchester, and are part owners of the Cheshire Lines ; and it is an open secret that they mean to pursue no Quaker-like policy in the competition that the fourth trunk line to town will accentuate.*

* Lord Colville of Culross resigned the Chairmanship of the Great Northern on March 1st, 1895, and Mr. W. L. Jackson, M.P., was chosen as his successor, the Board believing that he would be able shrewdly to direct the forward policy of the Company.

CHAPTER XVI.

THE NORTH-EASTERN.

The Size of the System—Where the Line Extends—Mr. Henry Tennant—Reckless Competition—Invasion and Monopoly—The Hull and Barnsley Railway and “Uncle Remus”—The Acquisition of Docks—Railway Extension at Leeds—Life at York Station—Prelates in the Cathedral City—Bishops as Passengers—Episcopal Wit—The Bishop of Ripon on Railway Management—Yorkshire Magistrates and North-Eastern Trains—Greyhounds on the Line—Charles Sacré and His Delight in Quick Travel—Some Famous Engines—A Disastrous Labour Struggle—Railway Losses through Strikes—Snowstorms—Some Exciting Incidents—A Novel but Serious Collision—The Company and their Servants.

THERE is a familiar saying with regard to house property, that “Fools build; wise men buy.” The North-Eastern have apparently put their faith in this maxim; for they have constructed comparatively few miles of railway. They have purchased tracks here and there, generally at a profit; and, linking and extending their lines over the north-east of the country, always shrewdly buying, and sometimes fighting to keep others out of the lucrative field so rich in mineral wealth, have acquired and consolidated an important system, which has a sanctioned capital of more than sixty millions, a revenue of seven millions a year, which carries forty-seven millions of passengers, thirty-two million tons of minerals, and nine million tons of merchandise, over a track 1,600 miles in extent, and which has scarcely a rival.

“Stretching,” in the words of Mr. Worsdell, “from Doncaster and Sheffield in the south, to Normanton,



QUEEN'S DOCK, HULL

(From a Photograph by Messrs. Paulsen & Sons, Ltd., S.E.)

Leeds and Bradford in the West Riding of Yorkshire, to Hull, Scarborough, and Whitby in the East Riding, the line runs through the city of York, at which point the Great Northern, Midland, and Lancashire and Yorkshire Companies all work into the North-Eastern Company's station. The main trunk line proceeds from York in a north-westerly direction, and branches run from it to the west, touching the Midland at Hawes, and the London and North-Western at Tebay and Penrith; to the east the main line serves the manufacturing centres of Stockton, Middlesbrough, Hartlepool, Darlington, and the great mining districts in the county of Durham, while from Durham a branch line leads to Sunderland. The main line, continuing through the picturesque Team Valley, brings the traveller in about twenty minutes to the city of Newcastle, where the Tyne is spanned by Stephenson's famous high-level bridge. Thence the railway passes through the county of Northumberland, skirting the sea-coast nearly all the way, and after passing near Alnwick reaches the border town of Berwick, by the celebrated bridge which crosses the Tweed. Branching off westwards from Newcastle, another section of the line passes through the village of Wylam, the birthplace of the Stephensons, and other places of interest, until it reaches Carlisle, the junction for seven different English and Scotch railways."*

The North-Eastern consists of many bits of track pieced together. Years ago many of these little lines

* "The North-Eastern Railway and its Engines," by William Worsdell, Chief Locomotive Superintendent.

were independent of each other, and, though of comparatively small capital and for the most part unproductive, had self-assertiveness largely developed, and were as fond of fighting as the barons of the feudal time. Mr. Henry Tennant, who was made a director of the North-Eastern in 1891, after forty-five years' service on the railway, had early experience of this fierce rivalry. In 1852 the Leeds Northern Railway, of which he was the manager, and the West Hartlepool Railway, standing side by side, fought the York and North-Midland, and the York, Newcastle and Berwick. The competition was reckless in the extreme. The fare from Leeds to Ferry Hill, a distance of seventy miles, was only half-a-crown; and the York, Newcastle and Berwick Railway Company, as is sometimes said of the modern tradesman, "lived on the loss," conveying passengers from Leeds to Newcastle and back by way of York for two shillings. Wisdom, however, soon came to these foes. Mr. Tennant, metaphorically, rode over the enemy's lines bearing a flag of truce. Acting upon his advice the companies forgot their feud and amalgamated, forming as it were the body of the North-Eastern, which has been growing and stretching out its limbs ever since. In 1862 the Newcastle and Carlisle Railway became part of its frame. In 1863 it attached the historic Stockton and Darlington Railway; and in 1865 it acquired the West Hartlepool and Cleveland line, which gave access to a land rich in mineral wealth and even then nearly always in the glimmer of furnace-fire.

The most singular incident in the history of the North-Eastern is the comparative ease with which they have pursued their policy of invasion and subjugation. They have calmly ignored the hatred of monopoly, and go on adding to their track and to their dock property. Even Parliament has been bewitched by their policy ; and in 1872 a Committee of both Houses made this novel declaration :

The balance of advantage to the public, as well as the shareholders, may often well be thought to be on the side of amalgamation. The case of the North-Eastern is a striking illustration. That railway, or system of railways, is composed of thirty-seven lines, several of which formerly competed with one another. Before their amalgamation they had, generally speaking, high rates and fares and low dividends. The system is now the most complete monopoly in the United Kingdom ; from the Tyne to the Humber, with one local exception, it has the country to itself, and it has the lowest fares and the highest dividend of any large English railway. It has had little or no litigation with other companies. While complaints have been heard from Lancashire and Yorkshire, where there are so-called competing lines, no witness has appeared to complain of the North-Eastern, and the general feeling in the district it serves appears favourable to its management.

The Hull and Barnsley Railway Company received a shock in 1891. Colonel Smith, the chairman, who has had a good deal of railway fighting since the day he unlocked the line, said the Manchester, Sheffield and Lincolnshire Company treated them best, and the Great Northern the worst, boycotting their traffic. A grievous fate, he pointed out, awaited the shareholders if the North-Eastern succeeded with their Bills before Parliament for the purchase of the Hull Docks and the

construction of an additional dock. They would get such a controlling influence, and be able to manipulate the rates so easily, that the Hull and Barnsley competition would be extinguished. The declaration of a dividend for the first, and so far the only, time in the history of the concern, apparently gave him no hope. He was thoroughly resigned to prospective misfortune. Joking (perhaps to conceal his despair) about the threatened effacement of the undertaking, he said: "If the Bills passed, their position would be similar to that suggested by a passage in that pleasant little book 'Uncle Remus.' In that work they were told that when the elephant had done stamping on the crayfish there were no more crayfish."

There have been many narrow escapes on the railway, but none more marvellous than that of the shareholders of the Hull and Barnsley Company. The crayfish, in Colonel Smith's adaptation of the allegory, managed to crawl out of the elephant's path, and were not stamped out at all. Just as the elephant, in the shape of the North-Eastern, was about to put its foot down in the Committee-room of the House, the Chairman of the Committee made known the fact that he was a shareholder in the railway and not qualified to sit. The Speaker, possibly sympathising with the crayfish, decided that the inquiry must proceed; and, greatly to the satisfaction of Colonel Smith and to the surprise of Mr. Dent-Dent, then chairman of the North-Eastern, the Bills were thrown out. During the session of 1893 the railway elephant was not what Mrs. Gamp would

call so "rampajus." The North-Eastern, leaving their proposal to make a deep-water dock in abeyance, sought the consent of Parliament to their amalgamation with the Hull Dock Company.* The railway company also expressed a desire to live at peace with Hull and to avoid hostility with the Hull and Barnsley Railway Company. The North-Eastern may, like the knight with the steel hand beneath his velvet glove, be as determined as ever to persist in their policy of aggrandisement, notwithstanding their astute declaration of peace. It is possible that instead of trampling the crayfish to death they intend to devour them, and that, some day, the Hull and Barnsley Railway, constructed as a protest against the monopoly of the North-Eastern, may be merged into the North-Eastern system.

The North-Eastern have availed themselves of every opportunity to acquire dock property. They own the Tyne Dock, with its fifty-five acres of water-room, with its great coal jetty, and its vast timber heaps, and yielding cargo to six thousand vessels yearly; they own seventy-three acres of dock at Hartlepool, where an immense trade is done in timber and in dairy produce; they own a sixteen-acre dock at Middlesbrough, shipping there an enormous quantity of steel rails and

* The sanction of Parliament has been given to the amalgamation with the Hull Dock Company, on condition that the North-Eastern spend half a million in improving the docks and adapting them to modern requirements. The anxiety of the Hull and Barnsley Company has also been allayed. The North-Eastern have promised not to reduce the dock charges below those fixed by the Hull and Barnsley Company, except by agreement or arbitration, and also to give the younger company access to any deep-water dock they may construct east of the River Hull.

sleepers for many a railway in foreign land ; and at Hull they already possess docks thirty acres in extent, and handle a great bulk of grain, fish, and timber. They are generally on the look-out to improve their undertakings. At Tyne Dock, which is already the largest coal-shipping dock in the country, dealing with six million tons a year, they have been making a new entrance and large extensions, hoping to develop the enormous trade from the pits ; and at Leeds they have been expending nearly a million of money in order to get more room. In association with the London and North-Western, they have been clearing away a great lot of house-property, putting down more tracks from Neville Hill to Marsh Lane Station, rebuilding Marsh Lane tunnel to span the five tracks, and carrying the additional lines into New Station at Leeds, beneath which the Dark Arches fire raged so furiously at the beginning of 1892. The station, which is the joint property of the two companies, will be greatly enlarged. Some passengers are even sanguine enough to hope that the two big capitalists will put their heads together and decide to make a really new station, with a noble span of roof after the fashion of St. Pancras, and with a handsome range of waiting- and refreshment-rooms for the convenience of travellers—that they will think it worth while, now Leeds is a city, to build a city station.

Passengers dodging the draughts, seeking shelter from the north-easterly wind at this North-Eastern Station, intuitively contrast it with the station at York, where you may easily find pleasant resting, if you do



THE STATION HOTEL, YORK.
(From a Photograph by Messrs. J. Valentines & Sons, Dundee.)

not care to brave the boisterous gust that sweeps down the line. The travellers' terminus at York in the coaching days was the "Black Swan," in Coney Street; and the mud-splashed vehicle, four days out from town, caused considerable sensation as it rolled up to the inn door and deposited its passengers, their joints stiff and their stomachs empty with their last stage of riding, for which luxury they paid twopence halfpenny per mile. The new and the old modes of locomotion are nowhere so accentuated as at York. The city is grey with antiquity. You could imagine, sauntering through Micklegate Bar, with its crests and curious figures, that the hands of the clock had been put back two hundred years at least, that the fever of the Revolution of 1688 had just died away, and that "Danby, after dashing at the head of a hundred horsemen into York and giving the signal for a rising in the north," had ridden proudly home again, conscious that he had done something to quicken the king's flight.

Outside the weather-beaten walls, in which "the moss is weaving its tapestry," there is to-day a dash of another sort—the wield of a force far more powerful than fearless Danby's—the dash of the locomotive. The great station, with its bold sweep of main line and ample sidings, accommodates more than two hundred trains daily, from the "Flying Scotsman" to the humblest stopper that crawls out Seamer way "to watch the corn grow." There is no station more interesting than that of York. With its handsome hotel, it is a gentleman among stations. It seems almost to take its proportions from the grand old

minster close by. It is lofty and spacious; handsome so far as a railway station can be, and attractive from its brightness, its light lines, and the harmoniousness of its colouring. A modern novelist has made a picture of life at York Station the appropriate opening to his interesting story; and certainly there is no platform that affords more scope for the student of character. There is a flavour of London about the group of business men who have come down by the East Coast express, and are taking their five-course dinner in the refreshment-room; but there is little of the intense hurry, or of the grind of town, in evidence here. There is a crowd at the refreshment-counter, another by the bookstall, and a shoal of people on the long, curving platform. But they are altogether different in stamp from the surging crowd that rushes to catch the morning train into the City.

The stately dignity of York is alien to hurry; if it hurries at all, its quickened step and bustle are associated rather with pleasure than with trade. In summer and autumn it is the halting-place of a multitude, full of the anticipation of enjoyment, on their way to the seaside—to Scarborough with its spa and music, to Filey with its spray-flecked brig and sea-bird colony of Speeton, and to Bridlington with its fine old harbour and new promenade and boating paradise. Later it is thronged with hunting-men, and there is the rattle of horse-boxes in the sidings. At Convocation the platform is crowded with bishops and clergy; and it was at one time a fine sight to see the great, manly form of Archbishop

Thomson, moving giant-like among the crowd, and to hear his deep-voiced welcome, hearty and sincere even to his foe, Canon Body, and even to the Bishop of Ripon, the only member of the Upper House who had dared to shock ecclesiastical susceptibilities by discarding the knee-breeches and gaiters of the prelate and donning a pair of broadcloth trousers!

This reference to Church dignitaries reminds one that they are not only eager to guide us in things spiritual, but to take part in the practical work of the world. They have a weakness particularly towards criticism of the railway management—inheriting it, perhaps, from Dean Swift. It has been the fashion to sneer at the North-Eastern Railway. A cruel tradition is kept alive by irascible passengers, furious at delay, that a train once started from Leeds to York, and was so long on the journey that the driver, young and robust when he climbed on the footplate, was old, decrepit, and grey when he reached the ancient city; that the train had crawled along so slowly that every carriage was decayed and worm-eaten, and that it was shunted into a siding with the greatest care lest it should fall to pieces. The line has also been the scoff alike of Bench and Bishop. Our prelates lately have rather prided themselves on “the exquisite gift of humour.” Perhaps they have been imbued by the rollicking spirit of fun that made light the heart of Dr. Rowley Hill, the late Bishop of Sodor and Man, who found something to laugh at in nearly every phase of human life. He never tossed aside his lawn sleeves

without giving rein to his wit. He had serio-comic thoughts of persuading the Isle of Man Railway Company to make his curates drivers of the trains in Manxland, believing that these young men, anxious for preferment, would put on steam, and give the island a lesson in rapid travelling, even at the risk of sweeping off the track the local proverb: "Maybe the last dog is catching the hare."

It was this bishop who, arriving at Rotherham Station, was respectfully asked by a porter: "How many articles, my lord?" and gravely replied "Thirty-nine, my man!" It seems almost as if he had dropped his jester's mantle in the Northern Convocation, and as if the Bishop of Chester and the Bishop of Ripon had divided the garment between them. They are the acknowledged jokers of the Upper House that meets in Archbishop Zouche's quaint old chapel in York Minster. One makes jokes about public-houses—and in fairness it must be said is endeavouring to legislate for their better management—the other jokes about railways.

Reaching a meeting at Knaresborough some minutes late, his lordship of Ripon apologised in his best episcopal manner, placing the tips of his fingers together and saying in his musical voice, which had a becoming inflection indicative of resignation: "You know, my friends, there is a North-Eastern Railway!" No sooner had he uttered these words than he was forgiven, for every layman present was aware, especially after such words of wisdom from a bishop's lips, that the North-Eastern Railway was a thoroughly abandoned



YORK STATION.

(From a Photograph by Messrs. J. Valentine & Sons, Dundee.)

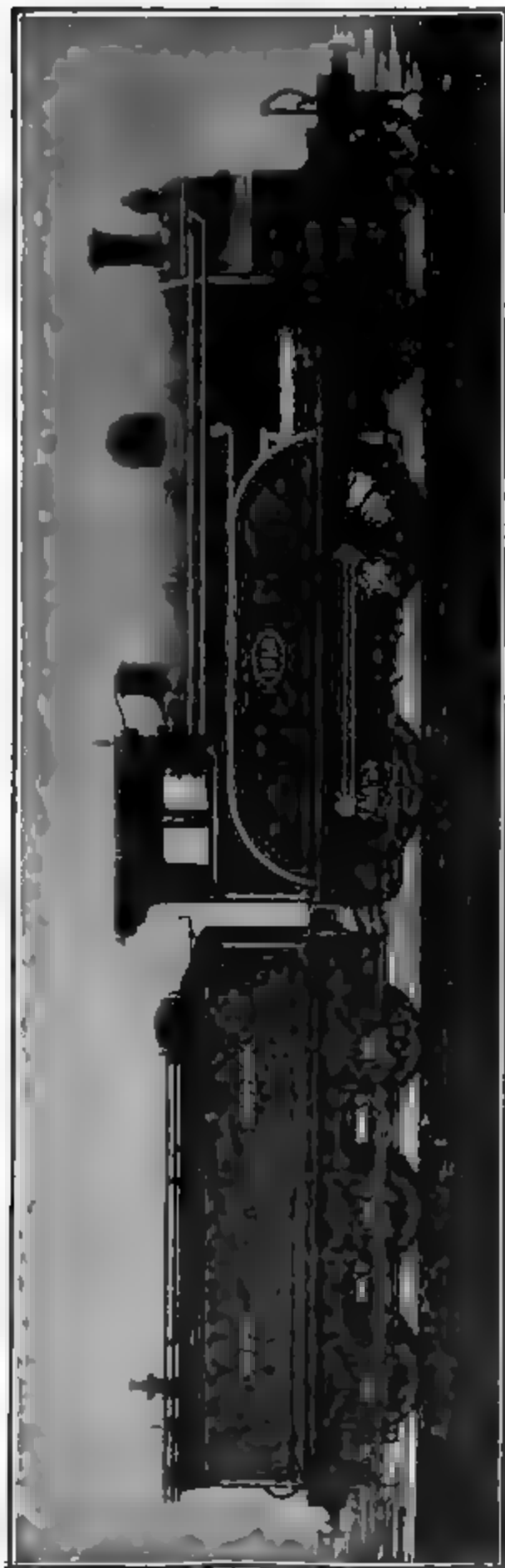
undertaking, altogether beyond redemption. But the climax of prejudice against the company was reached at the West Riding of Yorkshire Court of Quarter Sessions, when the Bench, remitting the fine imposed on a grand juror who had failed to answer his name, gravely remarked, "We have decided to remit your fine, sir; but in future do not depend upon the North-Eastern trains."

No doubt the local train service of the North-Eastern—parts of which appear to be arranged in the belief that the average life of man is at least two centuries—will afford the prelate opportunity for jest and the magistrate occasion for rebuke till the earth is suddenly effaced from the solar system. Nevertheless, the North-Eastern are not quite so lax in their train-running as these distinguished people would have the country believe. A company working an express service that maintains an average speed of fifty miles and a maximum speed of sixty-two miles per hour, cannot be altogether asleep. Anyhow, they keep better time than they would if their locomotives were manned by bishops and magistrates. At the August meeting in 1893 the chairman said they had made a new departure by running corridor dining-trains between London and Edinburgh. He had no doubt those trains would be very popular with the public. Having gone over those trains, he must say that the provision for the third-class passengers was of a most luxurious nature. Those who travelled first-class a few years ago would have been excessively grateful if they had had anything like

it. They were also trying another experiment, which he hoped would prove satisfactory: they were running a train from London to Newcastle, *viâ* Stockton and Sunderland. It ran up to London in the morning and back in the afternoon, and Sunderland people, he thought, had no longer cause to complain that they had been left out in the cold.

The locomotive department at Gateshead, and the engine works at Darlington and York, are the company's centres of industrial life, and have turned out an immense amount of rolling-stock, for the North-Eastern owns more than 1,700 locomotives, over 3,000 carriages, and 83,000 waggon. In engine-building the company have not been content to work on old models; they have fostered inventive skill and constructive ardour, and as a result the Worsdell and Von Borrie's compound passenger-engines, which may be styled the "greyhounds of the north," are doing some quick-pulling York way on the East Coast route, along which the "Flying Scotsman"—driven with more care and watchfulness than Phaethon exercised in driving the chariot of the Sun—makes one of the fastest journeys in England, and the longest run on this side of the Atlantic without taking breath—that from Newcastle to Edinburgh, a distance of $124\frac{1}{2}$ miles, the Midland run from St. Pancras to Nottingham being half a mile shorter.

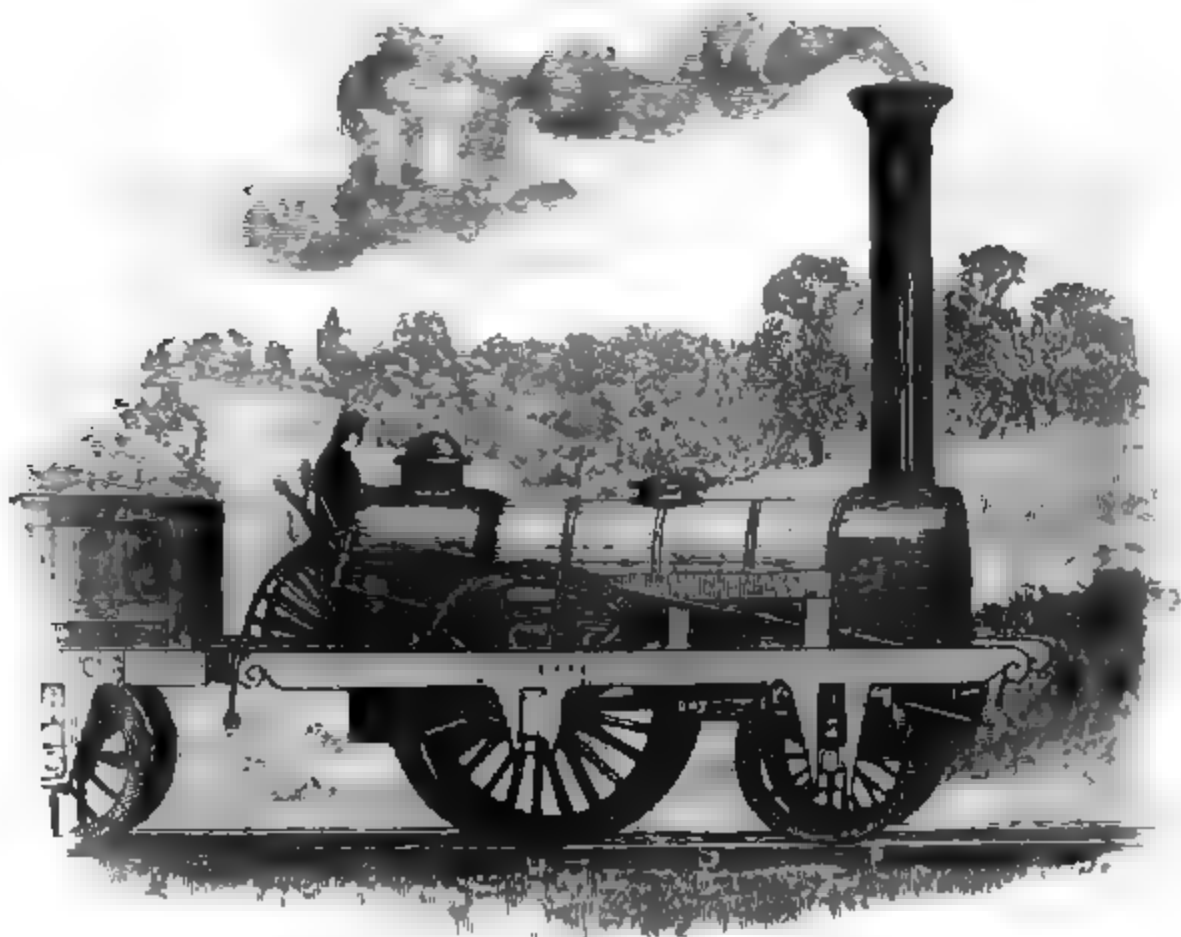
Mr. Worsdell, both on the Great Eastern, with which he was formerly connected, and on the North-Eastern, of which he has long been the shrewd engineering guide, has developed his compound engines so thoroughly that



THE LATEST TYPE OF NORTH-EASTERN ENGINE.

they can give you any speed you like, from fifty to seventy-six miles an hour, the latter record being quite high enough to satisfy the ordinary traveller; though it would not have perturbed Charles Sacré, the dashing engineer of the Sheffield Company, who revelled in rapid travel, and sometimes said to the driver of the express at Grantham: "Give the owd hoss her head, lad." Charley Sacré, bluff and yet genial, with the manners of an old sea-dog rather than of an authority on gradients, was liked all down the line, and the driver, nothing loth to do his bidding if he

could do it with safety, made the engine pant again as it swung into the station at Sheffield; and notwithstanding the stiff collar-work up the steep



A PASSENGER ENGINE BY STEPHENSON (1831).

line to Woodhead, climbed the brow with a speed that surprised the signal-men, reining in sharply, however, at the apex; for it would be madness to give any locomotive its head down the hill into Manchester.

“Visitors to the Newcastle Exhibition in 1887, or to the Edinburgh Exhibition in 1890,” says Mr. Worsdell, gossiping about some of the famous engines that have

run on the North-Eastern track, "will remember the contrast between the earliest and latest type of locomotive possessed by the North-Eastern Railway Company. The former, George Stephenson's No. 1 engine, 'Locomotion,' was built for the Stockton and Darlington Railway in 1825, and ran its first public trip on the day of the opening of that line, September 27, 1825, and its last on the occasion of the opening of the line from Middlesbrough to Redcar on June 4, 1846—a distance of seven and three-quarter miles, which was performed in twenty-five minutes. Another of these early locomotives, bearing the name of 'Billy,' and being also numbered '1,' is mounted at the Newcastle end of the High Level Bridge, and is an interesting object to persons visiting Newcastle. This engine was working at the Killingworth Colliery and only ceased from its labours in 1884. It was presented by the colliery owners to the Corporation of Newcastle, and the North-Eastern Railway Company, at their request, found for it a suitable resting-place. The celebrated 'Rocket' engine was built a few years later than 'Locomotion,' and was the type used on the Canterbury and Whitstable line, opened May 3, 1830, when the locomotive 'Invicta' ran the first train, and was driven by the late Mr. Edward Fletcher, who, for about fifty years, held important positions on the North-Eastern system."

The company have had some experience of labour troubles, notably the strike of engine-drivers a quarter of a century ago, and the dispute at Tyne Dock in 1874.

There was, too, some friction in the spring of 1893, when the company introduced a new rule as to the examination of the eyesight of engine-drivers and firemen, an examination so severe that the men contended it needlessly prohibited them from toil.

But the North-Eastern have been the greatest losers owing to a strike with the merits of which they had nothing to do. They had no say in the quarrel, but received some of the deepest wounds in the fight. In the early part of 1892 the whole of the North of England was industrially disorganised by a fierce struggle in the coal trade. The colliery proprietors of Durham pressed for a reduction of wages. The men came out on strike at the time the colliers of the Midlands and the North had recourse to what was styled the stop-week to check over-production. The bulk of these latter returned to work after six days' play, and no great harm was done except to the very poor, and to the nervous householder, who, particularly in London, had stocked his cellar with wretched coal at famine prices. But the Durham miners continued on strike for three months. They saw pits closed and flooded, and railway waggons and ships idle. The distress in the county was piteous, and many people were on the verge of starvation. Some parts of the North-Eastern system were deserted. A train became a novelty on the track; and here and there on the pit lines grass began to peep above the ballast. The traffic was hardly greater on some runs than it was on the Brandling Junction Railway in

1839, when trains were as scarce as angels' visits, and the tickets issued to passengers were of paper numbered by hand. On other lines traffic was entirely suspended, and the staff had little to do except wonder when the dispute would end. The report contained an unpalatable reference to the serious consequences of the strike:

The directors regret that the half-year has been marked by the unprecedented diminution of £497,101 in revenue, mainly due to the Durham miners' strike, which continued in full force for three months and caused a suspension of the Durham coal traffic, and of the traffic in iron-making materials in the district, as well as a reduction in the products of various other industries. The directors gave their careful attention to all possible means of reducing expenses during the strike. The train services, both for passengers and merchandise, were reduced, and work in the locomotive and permanent-way shops was restricted so far as that could be done without allowing necessary repairs to fall into arrear. The uncertainty as to the duration of the strike and the practical impossibility of making a temporary reduction in the permanent staff prevented any considerable saving being effected in the expenses of working the traffic, except in connection with the running of the trains.

Mr. Dent-Dent, who was at that time chairman of the North-Eastern Company,* speaking to the shareholders on this report, commented feelingly on the disastrous results of the combat. What, he said, appeared to be especially unfortunate was that the men who struck went in at last on terms that were distinctly less advantageous to them than those offered before the strike. The colliers and the coalowners

* Mr. Dent-Dent died on the 20th of December, 1894.

were not the only people who suffered. Nearly every tradesman in the county of Durham had a hard time of it; and he was sorry that the company's own railway men were many of them in perplexity through being put upon short work. Some of the shareholders also felt the effects of the strike. It was all very well to talk of railway shareholders being bloated capitalists, but there was a large number of shareholders in that great company, especially in the North of England, who had put their small savings in the undertaking, and who would find their means very much curtailed by receiving only half the usual dividend.

The hindrance and loss to railways by flood and snow and fog and fire are dealt with in a subsequent chapter of this work; but it is necessary to note here that the North-Eastern have had many a tough wrestle with Nature. In 1886 and 1888 their main line was thoroughly blocked between Newcastle to Edinburgh for several days. The official who commanded the gang in 1886 gave Mr. Acworth an interesting account of his experiences. They left Gateshead, he said, soon after midnight on Sunday, and they began by forcing their way through a drift a mile and a-half long and fourteen feet high. From Monday morning till Saturday night none of them ever had their clothes off, and for thirty-eight hours they were without water except the melted snow, and without food.

In the storm of March, 1888, the *Flying Scotsman*

was blocked north of Morpeth, and an express was snowed up near Killingworth. For some miles on the East Coast track the line lay beneath a world of white, and the most powerful engines, however skilfully fired and driven, were unable to get forward or backward. An attempt was made to plough the express engine out of the drift near Killingworth; but the snow-plough, propelled by four engines, was disabled by grinding against the half-buried express, the engine of which shattered the little travelling house adjoining the ploughshare, and injured its five occupants, Mr. Worsdell being the most seriously hurt. Including the loss of traffic, these storms cost the company no less than £100,000.

The lamentable accident at Thirsk—dealt with in a later chapter—aroused such comment with regard to the long-continued work of signalmen that the North-Eastern directors were looked upon almost as railway sweaters, determined to keep their servants on duty to the utmost limit of endurance; but it should in justice be recorded that before that disaster occurred they had striven to ease the hours of their men.* In the early part of 1891 they went to the additional expenditure of £45,000 in the locomotive and traffic department, chiefly in increased wages or in the employment of more hands

* As to the question of signalmen's hours, the late chairman recently said the company were endeavouring to carry out such arrangements on the main lines as would do away altogether with twelve-hour shifts, and make ten hours the limit. This could not be done immediately, because it required a considerable amount of contriving, and would, perhaps, involve the building of a certain number of cottages, in order to have the signalmen near their boxes.

to enable their servants to work a less number of hours. Nor have they been unmindful of the home-life of their workpeople. They have built four thousand cottages, at moderate rents, for the use of their servants, and in various ways encouraged and assisted institutions established for their physical and mental benefit, for their recreation and amusement when they are free from the toil and responsibility of the line.

CHAPTER XVII.

THE MANCHESTER, SHEFFIELD AND LINCOLNSHIRE RAILWAY.

The Sheffield Railway—The First Stride—Line-Making in a Troublous Time—A Track that Stretches Across England—The Sedan Chair—Through the Peak Fifty Years Since—Robbery from a Stage-Coach—Railway and Tramway—Quick Trains from Town—Grimsby: Its Docks and Shipping—A Great Fish Mart—The Skipper's Little Exaggeration—"Not a Rich Company"—A Busy Man—The New Line to London—The Storm the Project Raised—Despairing Painters and Indignant Cricketers—The Menace to Lord's—A Famous Ground—Withdrawal of the Great Northern Opposition—Artistic Objections to the Line—The Bill Through Parliament—The Track Open at Both Ends—Railway Enterprise in the Wirral Peninsula—Mr. Gladstone on Old and New Travel.

THE Manchester, Sheffield and Lincolnshire line, pushed across the country and almost into the heart of London by the indomitable resolution of Sir Edward Watkin, holds a very different position in the railway world to-day from what it did on November 17, 1841, when it took its first stride from Manchester to Godley. The line has never paid a high dividend, but it has provided a good deal of incident to the shareholders and the public. It has been hopelessly blocked by traffic; its trains have been snowed up on the main line, and wrecked by broken axle and tyre, causing havoc that has been a country's talk; yet the railway has had no thought of winding itself up in despair or in liquidation. Ignoring the dramatic romance of its own life and the caprice of its rolling-stock, it has kept on creeping

eastward, westward, and southward, till it promises to get into the first rank of English railways. The undertaking is typical of the career, perhaps, of some man who, after struggling through apparently crushing difficulty and disaster, finds after all that he is within grasp of success.

There was trouble even in its making. Now, a score of excursion trains can run down the line to Ashburys, taking thousands of people to the Belle Vue Gardens, Manchester, the north-country pleasure-haunt—noted, like Ephesus, for its wild beasts, and also for its boating, dancing, feasting, and fireworks—a place in which you might expect to meet Pendennis and Captain Costigan walking arm-in-arm on summer night, little thinking that the fierce major was about to estrange them, to shatter the boy's love-dream, and wring the father's heart so dry that it had to be drenched with spirits and water. Then the country was unsettled, in the midst of the Chartist riots, or, at all events, only just trying to recover from their disturbing influence. At Sheffield, in 1840, after meetings by night on the rough land at Sky Edge, and gatherings by day in Paradise Square—the local forum—the discontented men secretly determined to destroy the town by fire; but at midnight on January 10, Chief-Constable Raynor entered the ringleader's bedroom and arrested him before he could lift the musket by his side. The plot did not develop into very serious action, for the rebels, as they were then called, though they quickly gathered for desperate deed, were easily overcome.

Their intentions were sinister enough, however, for when "the chief conspirators were examined at the Town Hall the table was covered with spears, daggers, hand-grenades, fire-balls, and 'cats' for injuring the horses' feet."

Yet at this unsettled period, when trade was bad, money scarce, and bitterness filled the heart; when, in the grinders' expressive phrase, "There was nowt to do and nowt to spend," the line from Godley to Dinting was pushed on, being opened in December, 1842. Sheffield was now placed within a five-hours' journey of Manchester. From Dinting Station passengers travelled by coach to the "Angel" or the Commercial Inn at Sheffield; and sometimes a post-chaise, ordered by the quality, came all the way from the Tontine Hotel, the most noted posting-house in the same town, to take forward the people who could afford to be free with their guineas.

It is a pity the "Tontine" was ever demolished. "It was a fine brick structure, which you entered through an ample archway, where, right and left, was a colonnade, under the shelter of which you passed into the house. The building enclosed two spacious courtyards, flanked on both sides by stabling for a large number of horses; and the first court was sufficiently roomy for a coach-and-four to be driven and turned into it. The style of architecture and accommodation was that of some of the well-known hotels about Covent Garden. In short, it was a fine old English inn, where a family might comfortably rest for a night or two. It

was also a great establishment for posting in days when country squires travelled in their own carriages to London, and business journeys were performed in post-chaises. A score of horses were always ready in the stables for the cry of ' First pair out ! ' and the booted post-lads had only to slip into their blue jackets and ride a stage to Barnsley or Chesterfield." *

At a soiree of workers on the Manchester, Sheffield and Lincolnshire Railway, held not long ago, the programme was adorned with sketches illustrative of early transit and travel. It did not include a picture of the sedan chair, which obtained till the first quarter of the present century, the charge for carrying a person one thousand yards in Manchester being one shilling ; but it depicted the packhorse of 1673, the waggoner of 1754, the " Puffing Billy " of 1825, and the improved locomotive of 1892. Reference was made at this meeting to the rush of American trade in 1836, when all the horses on the farms between Sheffield and Manchester were requisitioned to drag steel to Liverpool for shipment. What the horses and waggoners endured on their slow and toilsome journeys can only be imagined by those who are familiar with the rough roads of the Peak, who have tramped by the rugged shoulders of Kinderscout, and over the moors to Glossop. This tract of land is still one of the wildest in England. A strolling-player, who had put on his stilts to cross the moor in winter, was found frozen to death on it ; not many winters back two youths were buried by a snow

* " Sheffield : Past and Present," by the Rev. Alfred Gatty, D.D.

avalanche there ; and in the time of the packhorse and the stage-coach there was romance, dramatic incident, and crime on this highway that winds through the picturesque glen at Ashopton and up the hillside by the lonely "Snake Inn." The packhorse man and his willing carrier have become interesting figures in history, and the rhymester has kept them in memory :

Onward we climb and upward pass
By the old causeway track,
Where long, long went in olden time
The pedlar with his pack ;
With carrier-horses, laden well,
Their progress cheered by jingling bell.

But the few people remaining to us who can remember them prefer the modern mode of conveying merchandise from place to place, though they think railway rates "abominably high and terminal charges scandalously excessive." Anyhow, there is not so much risk of losing your goods altogether by the way ; or of such a remarkable robbery as that which occurred on October 9, 1839, when a box containing £5,000 in gold and notes was stolen from the boot of the coach running between Manchester and the Potteries.

The extension of the Manchester line from Dinting to Sheffield was almost a hopeless task. Mr. Locke, the engineer, was about the only man who did not give way to despair. Capital flowed away as fast as the water that leapt down the rugged hillsides to disappear in the crevices hidden by bracken and gorse. The shareholders, embarrassed by bank failure or other financial

crash, could not pay their calls. Some forfeited their shares, cursing their folly meanwhile in plunging into such a foolish railway enterprise. But by desperate effort the money necessary to complete the track was obtained, the tunnel pierced through the gritstone of Woodhead, the viaduct at Dinting erected, and the line finally opened for through-traffic at the end of 1845. Money had now become more plentiful. The country was in the throes of the railway mania. Even the Sheffield and Manchester bonds, which had been bundled out of sight in oak chest or bin by shareholders as worthless, were eagerly inquired for on 'Change, and sold at a premium of fifty per cent.

There were in and about Lancashire projects for the construction of six hundred miles of railway at a cost of fifteen millions, and one million and a quarter was actually deposited towards the development of what were in most instances the wildest and most foolish schemes. The titles of some of the projected railways were grotesque, embracing the name of town and hamlet miles away from the intended track. The late Lord Derby, cutting the sod of the St. Helens and Wigan Junction Railway in 1888, said: "We look to the probability, almost the certainty, that the next generation, if not ours, will see a complete line from Paris to Pekin." *Punch*, during the railway mania, looked much further, and with mock gravity gave outlines of two longer railways; of "The Great North Pole Railway, forming a junction with the Equinoctial line, with a branch to the horizon," and "The Great Antipodean

and Hemispherical Junction between Glasgow and Sydney by the most direct route throughout the centre of the earth" !


In 1857 and 1858 the Sheffield Company had a fierce quarrel with the London and North-Western. They charged the latter company with a breach of the traffic agreement, withdrew from the alliance, and, backed up by the Great Northern, fought their old ally. Goods were carried at a ruinously cheap rate, and passengers were taken from the north to town at remarkably small fares. In fact the North-Western admitted that they were running trains that did not yield sufficient receipts either from passengers or goods to pay even the terminal charges. Nevertheless, they maintained a belligerent attitude for sixteen months, grimly keeping possession of London Road Station at Manchester, trying in every way to outwit their foe, and flinging away money in thousands. But peace was eventually made, the terms of settlement providing for the enlargement and rebuilding of London Road Station and its partition between the two companies.

In 1877 the Manchester, Sheffield and Lincolnshire Railway narrowly escaped Jonah's fate. The Great Northern and the Midland Companies seriously proposed to swallow it; but they had more scruples than the Birmingham man who recently swallowed his walking-stick. They found, when they got the line to their lips, that it required too thick a coating of sugar. The railway, perhaps glad of its escape, has been vigorously running about ever since. It has a considerable

hold on the Lancashire coast; it gets into Liverpool, it is winding about Cheshire, it goes up to Wigan, where it has just provided a new central station, it hopes to extend further north and west and to share in the Blackpool traffic, it shoulders the great railways in Manchester, and is also enriching the city; it runs into Leeds, serves Barnsley and Doncaster, looks upon Sheffield almost as its own hunting-ground, and then stretches away by Worksop and Retford to Lincoln on the south, and to Gainsborough and Grimsby and New Holland on the east.

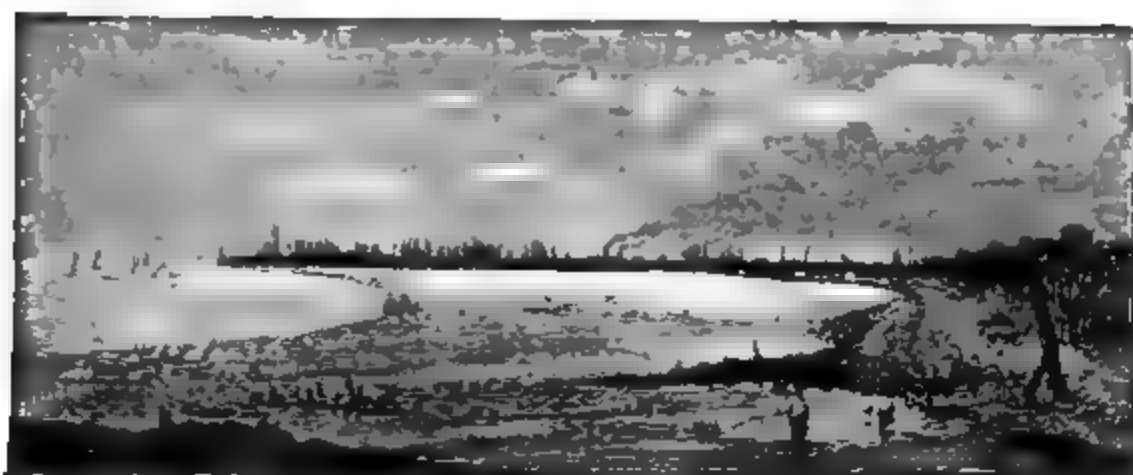
The opening of the Liverpool and Manchester Railway, and also of the Sheffield Railway, caused much indignation in the breasts of the shopkeepers in the small towns round about, and they bitterly complained that their customers had deserted them, that they now went by rail into the cities to do their shopping. It is curious that to-day, half a century later, a similar but hopeless complaint is heard in Manchester—not against railways but against the tramways, which have fifty miles of track, carrying yearly thirty millions of passengers, and taking a great number of these people straightway from the surrounding towns and suburbs into the heart of the city to buy.

The prejudice against railways has died out in Lancashire. The transit of goods in and out of Manchester is so continuous and rapid that the place which, according to an old print, chiefly consisted of the cathedral and a few quaint streets that led to the then verdant banks of the Irwell, has become the greatest



cotton mart in the world. The passenger desiring to get to the north from town has no longer need to travel by coach over the Peak roads. He has the advantage of three routes by rail, and, when the Sheffield Company have completed their trunk line, will have the choice of four.

Whatever the personal ambition of Sir Edward Watkin may have been, he must be allowed to have



GREAT GRIMSBY.

done splendid work for the East Coast and its people. He has contributed much towards the making of Grimsby and Cleethorpes. Grimsby, before its acquaintance with the railway company, was a quiet, sleepy coast-town, with many quaint traditions, but with little sea-going business. Now its great docks find room for a crowd of English and foreign ships, trading in timber, dairy produce, machinery, live stock, a thousand things of import or export; and sometimes the quays are busy with emigrants. Grimsby, too, is the great fishshop of England. The London and North-Western bring some loads of tempting salmon to town. The Great Eastern

do an immense trade in the humble, but well-flavoured herring, shovelled in a bright, gleaming mass from many a crowded lugger hold, about whose keel the sea has rippled or savagely dashed through the long nights when the nets were out. But Grimsby is a fish-mart as well as a port. She not only deals with the produce of her own fishing fleets, but receives supplies from the West Coast of England, from the East Coast of Scotland, and from the picturesque, swift-running waters of Norway, she gets even finer salmon, perhaps, than Mr. Andrew Lang ever gaffed. It is just possible that England is responsible for the growing military spirit in Germany ; for there is nothing so exhilarating as phosphorus, and it is a fact that the best tables in Berlin are graced with Grimsby fish. Grimsby is now really a busy order-market for the kingdom and for the Continent. She sends out fish trains, fast and slow, to the great cities of England, and distributes her supplies, no less than 70,000 tons per year, to nearly every county, and to many countries abroad.

After all, her great market should be London, and there is every probability that the Manchester, Sheffield and Lincolnshire Company will soon be able to run on their own line right away from Grimsby to the metropolis. It is a sore point with the company that they have for so many years been obliged to make profit for other lines rather than for themselves. The apparently natural flow of traffic north and south has made them dependent on other companies, particularly the Great Northern. They have been obliged, like

servants in many trades, to do the most work, bear the greatest hardship, and endure the most snubbing, to get bread. But better days are in store for them. Hitherto their share of receipts from traffic interchanged with other companies has been about one-third. It has been the old story of the jester's method of equal division, "There's one for you, and two for me." With a longer run and the handling of their own fish- and coal-traffic to London, the company's cause of discontent will almost disappear. They will get the profit they earn; but whether the new direct line will mean cheaper fish and cheaper coal to the householder in town is a question that would, no doubt, provoke an ingenious answer from the hon. baronet who has done so much to promote the scheme.

Since 1848, when the company, desiring to ferry from New Holland to Hull, first obtained Parliamentary sanction to run steamboats, they have been very fond of the water. They own nearly one hundred acres of it at Grimsby, where they have spent three millions on the docks, of which Prince Albert began the building, placing the first stone on April 14, 1849. The Royal Dock was named by the Queen on October 14, 1852, when she visited Grimsby; and, says an enthusiastic writer of the time, "A Royal dock it certainly was, for the hands of a Royal Prince laid the first stone, a princely sum was expended on its formation, in size and dimension it is a princely dock, and our Queen herself deigned to officiate at the christening."

It was the author's privilege, on July 22, 1879, to

journey to Brockesby Hall, Earl Yarborough's Lincolnshire place, to go on with the Prince of Wales to open the Alexandra Dock, which has an area of 45 acres. It was an important day for Grimsby. The town, the quays, the boats, were decorated with flags. The big-limbed, weather-beaten fishermen had come in from Dogger Bank, and they cheered the Prince and Princess with some zest as they steamed through the new dock with gaily-decorated boat to the sound of music. "It's a fine dock," said one of the company's skippers; "fifty acre, if it's an inch. But it's not big enough for Sir Edward yonder, smiling at t' Princess. If truth were known, he'd like to make a dock of the North Sea and put a goods warehouse on the Dogger."

At the meeting of proprietors in January, 1892, Sir Edward Watkin said they were not generally looked upon as a particularly rich company. They never pretended to be rich. They did their best to be so; but they did not do anything more than pretend to exist. But the rusty coat and "umble" manner of Uriah Heap try in vain to cling to the squire of Northenden. Even a railway with a capital of thirty millions is not poor; and the "old Sheffield line," though it may only pretend to exist, finds its existence a very restless one, with a good deal of robust push in it.

The traditions of fierce Parliamentary fighting in the early days of railway construction were revived in the session of 1891, when Sir Edward Watkin, one of the busiest and most versatile of men, not content with writing the "Life of Alderman Cobden of Manchester,"

with discovering new coalfields, with buying Snowdon, with making arrangements for the erection of a new Tower of Babel, and with pegging away at his Channel Tunnel project, strove, on behalf of the Sheffield Company, to get sanction for the construction of the new trunk line to London. The railway, it was proposed, should be practically an extension from the southern terminus of the Manchester, Sheffield and Lincolnshire Railway at Annesley, to Nottingham, Leicester, Rugby, and Quainton Road, joining the Metropolitan Company's system, and getting direct access to the capital.

The line, estimated to cost six millions, would, it was urged, not only give important advantages to the industrial centres of Nottingham and Leicester, and open up much rural country, benefiting the agriculturist and the labourer, but would also provide a very necessary outlet for the traffic of the company from the great coalfield of South Yorkshire and East Derbyshire, and for the trade in fish and general merchandise that they had developed at Grimsby. Moreover, it was pointed out that the company, which had been obliged hitherto to "grin and abide" while handing their traffic to other companies, would now "obtain the unrestricted use of $42\frac{1}{2}$ miles of railway all round the metropolis and across the Thames into Kent and Sussex." It was a straightforward and apparently smooth and practicable scheme. The line threatened to interfere with no vital interest. At Nottingham it promised to do the work of a vigorous sanitary reformer and demolish a mass of old property that would be better razed to the ground. In various

parts of the route it offered substantial help in business to those engaged in coal, iron, lace, hosiery, and leather.

Nor did it present any engineering difficulty, for with the exception of a tunnel 3,000 yards long south of Rugby the work of construction seemed likely to be easy. But opposition soon roused itself from slumber. In the heart of the country a protest was made by a baronet who detests strangers so heartily that he acts as surveyor of his own highways, and he emphatically declined to allow any railway within a mile of his mansion. The rival railway companies opposed the project; and the Great Northern Railway Company, holding that the Manchester, Sheffield and Lincolnshire Company were breaking the fifty years' agreement between the two companies—an agreement made with the authority of Parliament in 1858 and confirmed by the Board of Trade in 1861—showed persistent hostility to the scheme, fighting it tooth and nail in Committee. Quite apart from the ordinary railway rivalry, strong opposition sprang up. The intention was to make an ample terminus near Baker Street, between Euston and Paddington, to the west of Regent's Park. To get there it was calmly proposed that the line should cut through St. John's Wood and skirt or dive beneath Lord's Cricket Ground. The residents of this part of London were indignant. The lovers of cricket throughout the country received a shock.

The Art colony held meetings and signed a petition against the Bill. Thirty acres of their precious land were to be converted into a railway depôt. The line,


ruthlessly making its way by valuable residential property, was to be "a line for the conveyance not only of passengers, but of coal, manure, fish, and other abominations." Such vandalism was monstrous, and men of the fame of Mr. Alma-Tadema, Mr. J. MacWhirter, and Mr. Briton Rivière, with many others more or less eminent, took part in the protest organised against it. Even Mr. Harry Furniss reined in his whimsical humour and left his grotesque caricature of Mr. Gladstone's form and marvellous collar unfinished while he added his name to the memorial.

In the world of cricket Sir Edward Watkin's audacity filled every player with amazement—some with rage. It was suggested that the railway magnate should be interviewed by W. G. Grace, that he should be confronted by Spofforth, the demon bowler; and that if he did not prove amenable to their persuasiveness, then, as a last resource, Briggs, the Lancashire cricketer—who, according to an amusing article in an evening paper, had been promoted, "owing to the accuracy of his aim," from a professional bowler to an officer of artillery and Dictator of England—should cripple the ruthless baronet. The menace to Lord's was looked upon almost as a national calamity. Everybody who took an interest in cricket, who had been at Lord's in sunshine and shower, or who had read about the wonderful bowling, and batting, and fielding there, hated Sir Edward Watkin, and was prepared, at any hazard, to protect the sacred ground.

The thought of steel rails running through it was

repellent. Ballast and sleepers, Bessemer tracks and signal-boxes, banging waggons and the shrieks of engines seemed utterly alien to such a fine open space, hallowed by pleasant memories and by all that was best in cricket. The mind of many a player sped quite a century backward over the bridge of time, and recalled the early days of the Marylebone Club and the difficulty of obtaining the ground; how Thomas Lord, a sort of athletic jack-of-all-sport, bowled for the members of the club and secured a ground in Dorset Square; how the exorbitant rent drove the club to a new ground in North Bank Road, which was ultimately cut up for the Regent's Canal; and how, in 1814, the present site in St. John's Wood was procured. So firm and fresh was the turf in Dorset Square that it was taken away and placed on the North Bank ground, and actually removed again to Lord's, where, on June 22, in the first year of their new tenancy, the Marylebone Club played the Hertfordshire team, winning by an innings and twenty-two runs.

Since then the club has flourished. It has bought the ground, which is twelve acres in area, and, at a cost of £20,000, has built a pavilion that is the comfort and delight of the luxurious on summer days, when county teams are in the field, or the 'Varsity elevens are giving proof of the vigour of their lives by the Cam and the Isis. "The Marylebone Cricket Club," writes Mr. W. G. Grace, "is the first club in the world, and is held in deserved respect by every one who plays the game. At home and abroad every Englishman refers to



it with pardonable pride, and upholds it as the chief bulwark of our national pastime." Yet it was through this bulwark that the railway iconoclast intended to drive his engines. No such sacrilege had been contemplated since John Ruskin's wrath at the railway invasion of Derbyshire. There were people, indeed, who were inclined to apply the art critic's description of railway-making devastation to Sir Edward Watkin. They said he deserved to be seized by his own navvies and blown up by dynamite.

But, fortunately, no such fearful fate awaited him. Sir Edward Watkin, with the suavity which is one of his most conspicuous characteristics, soothed nearly all the indignant members of the club. He should be sorry indeed, he explained, to despoil such a cherished cricket-ground, and all he proposed to do was to take a narrow strip of the practice-ground, in compensation for which he was prepared to give the club the freehold of eight thousand yards of land near, to lease them four thousand yards, and to tunnel beneath the turf so carefully that there would be no interference with the play—nay, not a blade of grass would be disturbed. The ire of the club was appeased by the generous proposal; but the artists remained obdurate, and the Great Northern persisted in their antagonism. Sir Edward Watkin did everything in his power to propitiate the forces still against him. He was willing to raise the question of the agreement with the Great Northern when the line was completed. He was not averse even to an alternative site for the terminus. But his diplomatic

elasticity was in vain. The Select Committee, after twenty-eight sittings, found the preamble of the Bill not proved.

The cost of the Parliamentary proceedings was exceedingly heavy, and some of the shareholders



SIR EDWARD WATKIN, BART., M.P., IN HIS ROOM.

became uneasy as to the amount they would be called upon to pay, though they were scarcely so fluttered as certain proprietors of the South-Eastern Railway, for instance, who were once startled by the discovery that "the solicitor's bill contained 10,000 folios, had occupied twelve months in taxing before the master, and amounted to £240,000;" or the shareholders who had to pay the bill after the Stone and Rugby Railway fight, which was carried on through sixty-six sittings in the session of 1839, renewed the following session, and cost £146,000, the promoters being defeated after all.

Sir Edward was not disheartened. He told the shareholders in July, 1891, that the railway decisions given during the session had certainly been curious. Sanction had been given to the Lancashire, Derbyshire and East Coast Railway, "as mad a scheme as was ever presented to Parliament," and a great and prosperous concern like the Manchester, Sheffield and Lincolnshire Railway had had its Bill kicked out. But, he said, with a touch of defiance, the directors were a stolid class of men who did not know when they were beaten, convinced as they were that they were travelling on the right line in the interests of 13,000 shareholders, and they proposed to go forward with the Bill in the following session. Some of the cricketers now took alarm again; and at a meeting of the Marylebone Club, Mr. Denzil Onslow moved that the Bill should be opposed at every stage of its progress, inasmuch as he believed that the parting of any portion of the freehold at Lord's for the purposes of the railway would be fraught with the greatest danger to the interests of cricket. The resolution was rejected, however, by a majority of the members, who considered that the company's proposals were very fair, and that the club really had no *locus standi* in opposing the passage of the Bill.

The inhabitants of Marylebone, after the club had been propitiated, decided at a meeting held in January, 1892, to oppose the project on the ground that the railway would disturb the patients in the Samaritan Free Hospital, and in Queen Charlotte's Hospital, and, worse still, would dislodge 25,000 persons of the

humbler classes from the neighbourhood. Sir Edward Watkin, however, went on with his scheme undismayed, and was able at a meeting of shareholders in Manchester the same month to announce that satisfactory arrangements had been made with those who at one time were opponents. In 1891 they heard a great deal about Lord's. It was the idea of an old friend of his that they were interfering with a cricket ground at Marylebone which belonged to the House of Lords. It was so called, he believed, because a man of the name of Lord kept a public-house there, and opened the back part of his premises many years ago for cricket, and it had gone by the name of Lord's ever since. The proprietors of the place were great people and great lovers of cricket. He liked the game himself very much, and would not do anything to damage so excellent an institution. They had made a settlement in a sensible manner, and Lord's were perfectly satisfied. And with regard to many of the landowners, they had come to a fair understanding and had got rid of opposition. They had also made a settlement with the Great Northern Company, under which the old agreement would be modified, and there would be a general interchange of running-powers and facilities with that company. The hon. baronet, jaunty and sanguine, now thought there was strong probability of getting the Bill through, and believed they might look forward with confidence to the new portion of their line paying six per cent.

The Bill came before the Committee of the House on March 21, 1892. The opposition was less formidable ;

but the promoters, ready for any emergency, were prepared with 159 witnesses. It was explained that the old fifty-year agreement with the Great Northern—an agreement prohibiting competition one with another—had been superseded by a working arrangement encouraging friendly and reasonable competition over each other's lines, and that the Great Northern were no longer antagonistic to the new line.* Peace, it was also stated, had been made with those who controlled Lord's Cricket Ground. In London the new line would begin with a junction close to the West Hampstead Station on the Metropolitan Railway, and terminate in the Marylebone Road. The station would be fronted by a fine hotel, and at each side would be a sixty-feet road giving access to the passenger platforms. A separate entrance would be provided to the goods station, and the coal yard would be near the Portman Market, in a situation where no objection could be taken to it. For a considerable distance in London the line would be in tunnel, but the company were prepared to pledge themselves not to build over the tunnel, and something like fifteen acres of land might then be converted into a sort of boulevard.

The London County Council still looked askance at the project; and the Art colony in St. John's Wood reiterated their dislike of the line. On behalf of the 200 artists who have their studios in the locality—studios rich in furniture, drapery and light, retreats in which modern art lives amid æsthetic surroundings—

* See *ante*, p. 318.

Mr. Alma-Tadema protested against the railway invasion, and maintained that the shake from traffic would interfere with good work; that when the artist sought to put a straight line on the canvas the line would be crooked. Another painter, residing at West Hampstead, said, in a sardonic vein, that the new railway would give his neighbours a very good idea of what an earthquake was like, the only difference being that while a natural earthquake was soon over, the earthquake Sir Edward Watkin proposed to work would be continuous.

Mr. Bidder, Q.C., who held a brief for all the opponents, must have had an intuitive misgiving that the opposition was likely to be in vain, for he addressed the Committee in a remarkable speech, declaring that the object of the Bill was not to accommodate the towns and villages on the route of the proposed new line, but to satisfy the ambition of the promoters to become a great trunk line to London. It was, he said meaningly, to accomplish the deep-laid ambitious schemes of one man—a man well-known in the railway world—whose hope and dream was to terminate his life by running a through carriage from the North to London, and from London to Paris. The Channel Tunnel was part and parcel of Sir Edward Watkin's dream; and he was now leading forward the shareholders of the Manchester, Sheffield and Lincolnshire Railway to ruin in the wild belief that this great line would increase their dividends. Mr. Littler, Q.C., for the promoters, held that there was no better pioneer

and guide in railway matters than Sir Edward Watkin, and bluntly characterised Mr. Bidder's utterances as "rubbish, and highly absurd." These speeches were made on April 18. The same day, the Committee, having deliberated for half an hour in private, declared the preamble passed.

At the shareholders' meeting in July the same year, Sir Edward Watkin said that was a somewhat memorable day in the history of the company, for they were not merely the Manchester, Sheffield and Lincolnshire Railway Company, but they had overcome opposition and obstruction, and were at last in possession of powers to make the new line. Mr. Sutcliffe Thomas pointed out that the baronet had had a very busy year, and congratulated him on his threefold triumph—he had married a charming lady, he had safely piloted the Bill through Parliament which would give them the line to London, and he had been again returned to Parliament. At this time Sir Edward gave a striking illustration of the fact that the busiest men have the most leisure, for he wrote to *The Times* suggesting a way out of the Irish difficulty by the construction of public works—notably, a ship canal of capacious dimensions through Ireland, and a submarine tunnel from the North of Ireland to the South of Scotland, maintaining that both projects could be carried out at a cost of twenty millions, the interest on which at three per cent. would only be one-fifth the cost of keeping a hostile force in Ireland.

Another step towards the working of the new trunk

line to London was taken on September 1 in the same year, when the extension constructed by the Metropolitan Railway Company to Aylesbury was opened for traffic. The new line provided the link necessary to give the Metropolitan access to Quainton Road; and there was no longer any bar to the making of the track northward, for the Bill had by this time been sanctioned by the House of Lords, and the Company were free to employ their forty thousand men on the various sections of the line, of which the first sod was cut by the Countess of Wharncliffe in Alpha Road, St. John's Wood, on the 13th of November, 1894. Earlier in the same year the Earl of Wharncliffe had succeeded Sir Edward Watkin as Chairman of the Company.

Another section of the line, from Staveley, in East Derbyshire, to Annesley, was opened for passenger traffic on January 2, 1893, and a few days later Sir Edward, unable through indisposition to attend the half-yearly meeting of the shareholders at Manchester, gave, in a letter to Lord Wharncliffe, some interesting bits of personal history. "It is," he wrote, "forty years since I entered the service of the shareholders as manager, and thirty years since they elected me a director, and about the same time since I became chairman. In that long period I have never before failed to attend a general meeting of the company. It is a great affliction to me to be incapacitated at a very interesting period of the company's career; but I trust that before long I shall be able to resume my work in the interest of the



SWING BRIDGE OVER THE DEE AT HAWARDEN.

shareholders, who have placed me under a debt of gratitude by their confidence and kindness—a debt which I shall endeavour to repay, if that be their wish, by devoting what may remain of my life and strength to their services.” *

Mr. Gladstone, who during his long life has seen many strange developments of locomotion, from the pack-horse, the stage-coach, the player crossing the moors on stilts, to the steam-engine and the bicycle, placed the first cylinder of a new railway-bridge† across the Dee on August 16, 1887; and had apparently no fear of any invasion by the French, for he expressed himself in favour of the Channel Tunnel, remarking: “Sir Edward Watkin is one of those men who are wicked enough to desire that a tunnel should be constructed under the Channel to France, and I am compelled to confess publicly before you that I am one of those who are wicked enough to agree with him.” The declaration caused a good deal of satisfaction in Sir Edward Watkin’s breast; but it aroused considerable surprise in other quarters, particularly among military men, though they were not nearly so amazed at Mr. Gladstone’s railway enterprise as the right hon. gentleman’s Midlothian friends, who, taking the aged statesman to inspect the wonders of the Forth Bridge,

* At the midsummer meeting of proprietors Sir Edward Watkin had thoroughly recovered both in health and vivacity, and expressed the opinion that the completion of the new line to London would be the salvation of their property.

† The swing bridge, which has a span of 140 feet over the Dee, and gives a direct route by the Sheffield Company’s line into North Wales, was declared open by Mrs. Gladstone on August 3, 1889.

suddenly lost him, and afterwards found that he had simply walked away from them, and was sitting on a log at the other end of the structure wiping the perspiration off his thoughtful, deeply-lined face, and allowing the breeze to blow about his scanty locks.

Mr. Gladstone, who took his degree at Oxford much more than sixty years ago, when railways were in their infancy, knows perhaps more about the development of England than any man. At Hawarden Bridge, on October 21, 1892, he cut the first sod of the new Wirral Railway, which runs a distance of some fourteen miles from Birkenhead to the river Dee, and is intended as a link between the great industrial centres of Lancashire, Yorkshire, and Wales. He first broke the earth with a silver spade, placed the sod in a barrow of oak, wheeled it along the plank, and tipped the soil in navy-like fashion. While his hands were still turf-stained, and with his head bared, he walked to and fro on the plank, explaining how the railways from the East rather than from the West of England had pushed their way to the Mersey-side, and nearly accomplished their great work of establishing communication across the Dee, across the Mersey, with Liverpool, and through Liverpool with all the vast population beyond it. He added that he had asked his friend Sir Edward Watkin, on his way down: "If I live long enough, will you take me through without any change of carriage from Hawarden to Folkestone?" and the railway magnate replied "Yes."

At the luncheon, Mrs. Gladstone was presented with

a silver model of the wheelbarrow used by her husband in cutting the first sod, Sir Edward Watkin facetiously remarking : " We have long known Mr. Gladstone as a leader, now we know him as a wheeler." Then Mr. Gladstone proposed "Success to the new Wirral Railway," and out of his inexhaustible store of personal and historical recollection made an interesting speech on the iron roads, or rather the steel tracks, that have done so much to encourage the industry and extend the trade of England. His description of the approach to the principality from Lancashire when he was a boy bordered on the humorous. "It so happens," he said, "that though I am not Welsh, yet my boyhood was passed at the mouth of the Mersey, in sight of Wales, and that thus it is I was a fervent admirer of Moel Famau and the Welsh mountains. But as to getting into Wales, as to getting from Liverpool to Birkenhead, that was then a formidable affair. You would have had to hunt about to hire somebody with a little boat, and he would have had to put off from the Liverpool side and contend with the strong tide of the Mersey as he best could. In point of fact we used to look across the Mersey in those days from the Lancashire coast to the Cheshire coast very much as a man looks, or rather perhaps with more sense of distance than a man looks nowadays from the cliffs of Dover or from the pier at Folkestone across to the coast of France."

Since then they had, he said, seen great changes. They had now the prospect of an independent communication across the Dee which would give them the

shortest and most direct route with the Mersey and with Liverpool. A few years ago there was no tunnel under the Mersey, there was no railway or plan of railway across Wirral, and no prospect of a bridge over the Dee. Now they had a tunnel under the Mersey, and it was not improbable that before long there would be another, perhaps more than one. At any rate, there must be established free passage under the Mersey for all traffic whatever, long and short, goods and minerals of every description. There was nothing remaining to be done, except this one link, the railway across Wirral.

Contrasting the condition of Wales now with its condition in his own youth, he showed that it had thriven even under the monopoly enterprise of the London and North-Western. When he made his first journey on the North Coast as far as Bangor and Carnarvon there was no such thing as a house to be hired by visitors. In fact, there was no such thing as a watering-place in North Wales. It was thought impossible to make a paying railway through such a rugged land, and a deputation waited upon Sir Robert Peel, who was then Prime Minister, in the hope of obtaining a grant out of the Consolidated Fund towards the construction of the line. But, said Mr. Gladstone, with a just perceptible smile, Sir Robert Peel was a very circumspect statesman, particularly where the public purse was concerned, and he encouraged the promoters of the railway to take a more sanguine view. The railway was made; and this humble line, this

impossible railway, was, at the present moment, the most productive and remunerative part of the whole vast system of the London and North-Western Railway Company. Indulging in epigram, he said : “ Wales imports visitors, and exports minerals ; ” and though he could not refrain from a sly tilt at the love of monopoly that still lingered in the breasts of the old potentates of the North-Western, he thought Sir Edward Watkin would be able to persuade them that their line through North Wales should no longer be deprived of feeders, and that it was to their interest to recognise the Wirral Railway, which would shorten the distance between Liverpool and Connah’s Quay by twenty miles.

Mr. Gladstone did the Sheffield Company good service in the inquiry at which they sought, in conjunction with the Wrexham, Mold, and Connah’s Quay Companies, to acquire the uncompleted portion of the Wirral Railway, that part connecting the Dee Bridge and the Mersey Railway. With his thorough knowledge of the locality and of the transit needs of the neighbourhood he made out a strong and ingenious case in favour of Sir Edward Watkin’s project, and the purchasing companies, under the arbitrator’s award, obtained the railway link they required for £96,000. What will be the next move is anticipated with some interest. Will the Sheffield Company, or the Great Western in conjunction with the North-Western, buy the Mersey Railway ? The two latter companies have obtained powers to widen their joint line from Chester

to Birkenhead at a cost of half a million ; and so eager were they to secure more rail space for the 200 trains that pass daily between these two points that they expressed themselves willing to "make a parapet on the line at Chester Racecourse to prevent the horses from seeing passing trains and the passengers from seeing the races for nothing." Nor did they object very strongly to the insertion of a novel clause in the Bill rendering them liable for the damage that might be done to the historic city walls by the vibration caused by passing trains. Why were they so complacent under these singular conditions ? Because they mean to cross the Mersey somehow, to get a clean run from the south-west, through Wales and Cheshire, into the heart of Lancashire and Yorkshire. Nor have the Sheffield Company bought the Wirral link merely to rust. Mr. Gladstone hints at the construction of additional tunnels under the river ; but the Mersey Tunnel shareholders, though no doubt gratified at the engineering feat with which they are associated, have not much reason to rejoice at the undertaking as a profit-maker. The shares have dropped deeply in value, and there is no dividend ; though a different tale might soon be told if a powerful railway acquired the property, re-modelled the approaches, made the tunnel simply a section of a long track like the Severn Tunnel, and utilised the line for goods- as well as passenger-traffic.

CHAPTER XVIII.

THE GREAT EASTERN—THE WORKMAN'S RAILWAY FRIEND.

"Bradshaw's Railway Manual"—The Old Eastern Counties Line—A Scapegoat Company—A Passenger's Whimsical Cartoons—Lord Salisbury as a Railway Chairman—Some Notable Engines—The Cross-Country Railway—Cutting the First Sod—A Lady's Speech—The Prospects of Traffic—Rolling-Stock Seized for Debt—A Tempting Prospectus—An Obliging Railway—The Rapid Progress of the Great Eastern—Third-Class Dining Cars—A Comprehensive Trade—Workmen's Trains—Talk in the House—A Cheap Ride—Speeding Over the Sea—A Crowded Railway Station.

"BRADSHAW'S Railway Manual," with its mass of statistical tables and severe-looking paragraphs about amalgamations, leases, and agreements hiding between its green cover, is a work from which the novel-reader would turn away in dismay ; yet it is one of the most interesting books in the wide field of English literature, and contains a vast fund of information, not only with regard to our own railways, but also to the lines that pioneers have made in Asia, Africa, Australasia, America, and the West Indies. It gives in a sort of catalogue-form particulars of the development of nearly every railway at home and abroad ; and it tells us, in relation to the Great Eastern Railway, that "it was incorporated by the Act of August 7, 1862 ; comprises the Eastern Counties, Norfolk, East Union, East Anglian, and East Suffolk, as well as other subsidiary undertakings ; and that it has 1,016 miles of track productive, including 116½ miles of joint lines." But, notwithstanding its rich store of railway knowledge,

the "Manual" cannot be recommended for recreative perusal: it is altogether too serious. It never swerves from its rigid purpose—the massive grouping of facts and figures—to gossip about the incident and romance of the line. Macaulay, with all his mental strength, would have attempted in vain to grasp every detail crowded into its small type. A prolonged study of the work is, in fact, calculated to bring on that excessive loss of memory from which the woman suffered when, on being severely bitten by a mad dog, she was obliged to consult a little note-book to ascertain why her hand was bandaged.

The "Manual" is silent with regard to the humorous start in life of the Great Eastern, which has spread her rails amid much badinage and struggling, from London to Cambridge, to Peterborough, where the coal traffic exchange is effected with the Great Northern, to Newmarket, Ely, and all through the big shoulder of Norfolk and the pleasant county of Suffolk. North-east from London the line serves Chelmsford, Colchester, Ipswich, and on the coast-line Harwich, the portal through which a mass of human life is ever passing from Liverpool Street to the Continent; as well as picturesque Lowestoft, and breezy Yarmouth, with its flavour of town, its aroma of herrings, and its memories of Peggotty and the quaint boathouse, and the career of David Copperfield.

The Eastern Counties Railway, incorporated in 1836, was practically the foundation of the Great Eastern; and it is admitted that it had an "unenviable reputation."

There is a buffoon in every society. The English people, though they are supposed to "take their pleasures sadly," must have a butt for their jests. Just now in the railway world they make merry over the local trains of the North-Eastern. Forty years ago they ridiculed the Eastern Counties. Mr. Francis styled it



A RAILWAY CARTOON. (Page 378.)

"The Scapegoat of the companies—the pariah of railways;" and *Punch* made fun of the management of the line and the hopelessness of the locomotion thereon, remarking: "On Wednesday last a respectably-dressed young man was seen to go to the Shoreditch terminus of the Eastern Counties Railway and deliberately take a ticket for Cambridge. No motive has been assigned for the rash act!"


A self-confident passenger, enraged at what he considered the gross incompetence or negligence of the company, was in the habit, whenever he went on a journey, of distributing clever cartoons holding up the

company to derision. One of these represented a costermonger, with his donkey and barrow, racing and outrunning the train. Another, still bolder in its conception, showed the coster in his barrow driving along the line with his donkey, apparently going about eleven miles an hour. The donkey is pulling the train, the engine of which is fastened to the coster's cart by a long chain. The engine-driver is sitting asleep on the tender; flying from the engine funnel is a flag bearing the letters "E.C.R." and a kicking donkey; and on the guide post, astride the arm pointing to London, sits Mr. Punch with his finger to his nose!

Difficulty is not easily overcome, and the Great Eastern after the amalgamation had their share of it. In 1867, Lord Salisbury was chairman of this railway company, and gave the concern the benefit of his judgment. During his reign on the line the directors sought to obtain £1,500,000 as additional capital to relieve them from immediate necessity; but Parliament refused its sanction, distrustful of a railway company whose locomotives had been captured by creditors. The board was evidently composed of Dick Swivellers. When one street was closed to them they went down another. The directors adroitly altered their Bill, boldly asked for double the money, and were themselves surprised when Parliament gave them power to raise it.

The company have marvellously developed their undertaking since that time; and Mr. Parker, secretary to the locomotive superintendent, gives a remarkable

instance of industry at the railway works at Stratford, established in the time of George Hudson, the "Railway King," and now considerably enlarged. "So complete is the organisation, so efficient the machinery, and so skilful and willing are the workmen, that in December, 1891, a six-wheeled-coupled goods engine, weighing with its tender over sixty-seven tons, was erected, painted lead colour, and in steam, in the almost incredible space of ten working hours, and after running the usual trip trial, was immediately put to work on the London and Peterborough coal service, at which it has since been continuously engaged." It is not difficult, in strolling through the great toiling departments—the steam-hammer shop, the machine shop, and particularly the fitting and erecting shop—to accept the statement that "a new engine is turned out every thirty-two working hours, that new carriages are built at the rate of one every eight working hours, and waggons at the rate of one every three and three-quarters hours." A variety of engines have been built by the Great Eastern since they turned out their first locomotive, designed by Mr. J. V. Gooch, in 1850. One of the most notable, associated with an interesting event to the nation, is Sinclair's single-wheel outside-cylinder passenger engine, No. 284, which, gay with flowers and flags, took the Prince and Princess of Wales to Sandringham on their wedding-day. But perhaps the most striking, as indicative of the progress of locomotive construction, is the "Petrolea," No. 760, built by Mr. Holden, the locomotive superintendent—an engine that pulls a



heavy express almost without the help of coal. Its tender is fitted with an oil tank, and the engine is supplied with liquid fuel by an injector that passes beneath the fire-hole. The fire-box, however, is constructed just like that in an ordinary locomotive; and the engine may be converted into a coal-consuming one at will. An illustration of a later type of this engine is given in another part of this work.*

The coal traffic of the Great Eastern has reached the bulk of three million tons per year; and it is likely to become greater, for the company have not only opened a large number of depôts in the suburbs of London, but have subscribed £250,000 towards the construction of the Lancashire, Derbyshire and East Coast Railway, which will give them direct access to the Midland coalfield, and enable them to get enormous supplies of fuel into East and North London.

The first sod of this new railway—the route of which has been indicated in Chapter XIV.—was cut at Chesterfield on June 7, 1892, by Mrs. William Arkwright, of Sutton Scarsdale, the wife of a descendant of the famous Richard Arkwright, the inventor of the spinning-jenny. Edward Maynard, the magistrate, with his old-world manner and dignified bearing, little thought when he lived in his great brick house in West Bar in that town that his meadow would be cut up for the construction of what one writer has somewhat hurriedly described as “The Last Great English Railway.” Perhaps he would have derived some consolation

* See Vol. II., p. 255.

from the fact that the ruthless act, having become imperative, was performed as gracefully as possible by a lady. In the presence of a great crowd, and amid much flag-flying and cheering, Mrs. Arkwright, with an ebony spade mounted with silver, broke the ground, filled a silver barrow with sods, and wetting her fingers as is the navy's habit, wheeled and tipped the load at the plank's end, and deftly placing herself between the handles, brought the barrow back again neatly enough to satisfy the severest ganger. The lady was presented with the spade and barrow by the Duke of Newcastle, and in acknowledging the gift, made a pretty, sanguine speech, saying :

"I feel greatly flattered at the honour of being allowed to play so important a part in to-day's ceremony. It is all the more grateful to me because I cannot help feeling that that honour is quite unmerited. Perhaps, however, my qualification is held to be that I have taken so keen an interest in the scheme from the very beginning—an interest which began when the scheme was simply an idea in the brains of one or two, but which has grown and grown, keeping pace with its triumphant progress through Parliament, and which will not wane henceforth during the construction of the line, for I shall not be satisfied until I have actually travelled *via* Chesterfield right across England from the East Coast to the West Coast on the embodiment of the original idea. That feat I think I am already able to predict will be practicable within three years, and I invite you all from to-day to accompany me on the 7th June, 1895. Those who accept will approve by raising a cheer for the East to West Railway."

Deviations from the original plan, shortening viaduct and tunnel on the main line between Bolsover and Chesterfield, have been sanctioned, reducing the cost of

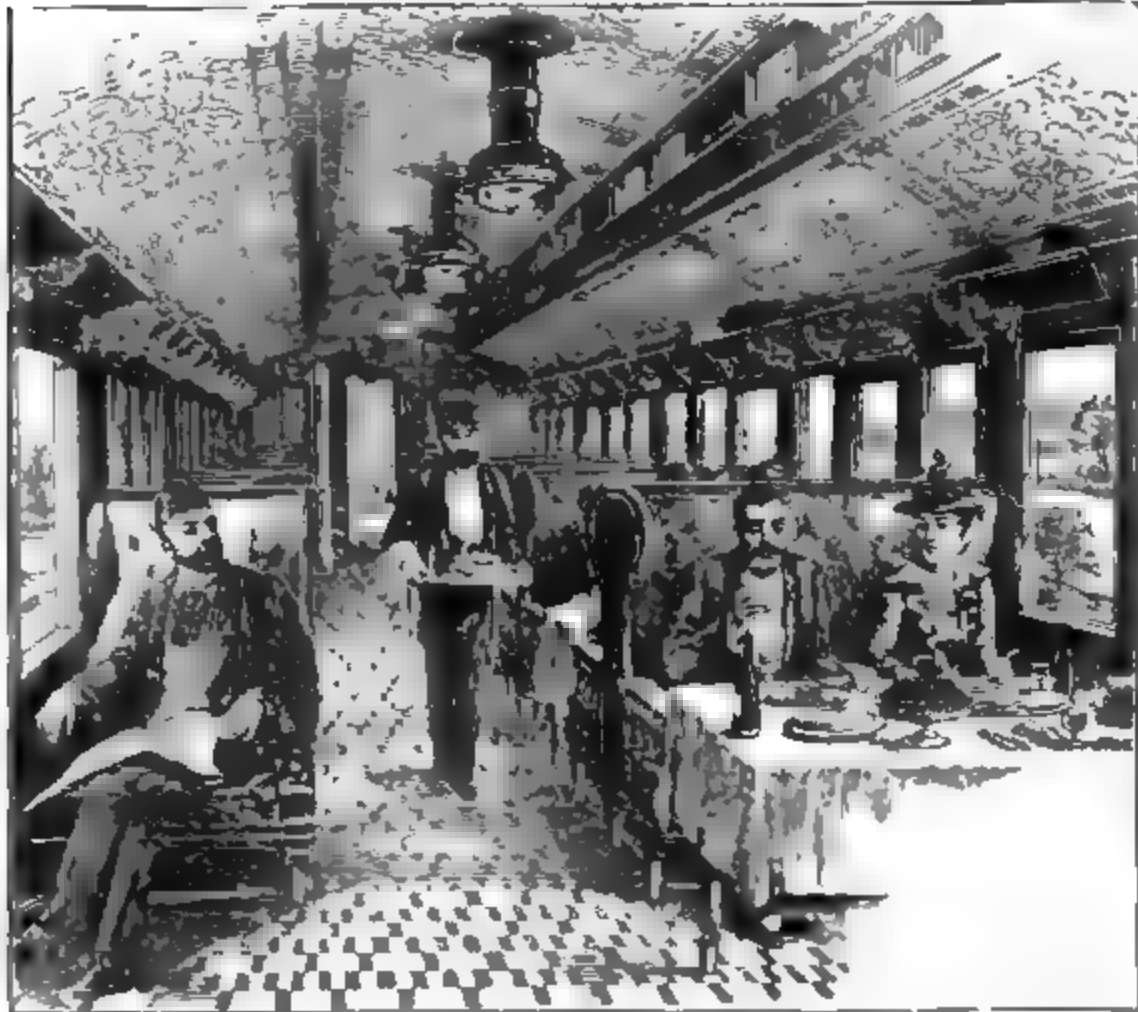
construction by nearly one hundred thousand pounds. The public subscription in response to the prospectus amounted to a little over half-a-million; but the directors did not think it wise to proceed to allotment till the amount needed for the making of the central section of the railway from Chesterfield to Lincoln had been raised, consequently the landowners and colliery proprietors interested found the balance, and the work was commenced; Mr. Emerson Bainbridge, the chairman, telling the shareholders, from his experience as one of the largest mineral freighters of the district, that he believed the line would have a coal traffic altogether exceptional among English railways. The authorised capital is eight millions; and interest at the rate of three per cent. is to be paid during construction.

The railway, when finally completed, will be about a hundred and seventy miles in length; and steady progress has been made with the work since it began with the straightening of the river Hipper between West Bar and the Boythorpe plantation. The line, it is confidently expected, will develop a great mineral traffic; in fact, the directors hope it will be one of the largest feeders of the Manchester Ship Canal from their western terminus at Warrington, to send thousands of tons of coal, iron, lead, and lime along the waterway that has made the cotton-trafficking city a seaport. The company have also some prospect of creating a substantial daily passenger traffic between Lincoln, Chesterfield, Macclesfield, and Lancashire, and an excursion traffic to the "Dukeries" to Chatsworth, Monsal, and Buxton, by

the line which is "to be carried over Monsal Dale on stilts," and the plan of which has so amazed Mr. John Noble, one of the Midland directors, that he remarked: "I shall believe in that viaduct when I see it!"

The Midland Company, by means of the Dore and Chinley Railway, and perhaps a branch line through Brampton to the new Peak track, will no doubt fight the cross-country company westward. The Manchester, Sheffield and Lincolnshire Railway Company are already resenting the introduction of a railway to the "Dukeries," and decline to remain passive while a rival port to Grimsby is created at Sutton-on-Sea. But southward the new railway has the support of two powerful companies, and the friendship of the Great Northern and the Great Eastern opens up unlimited possibilities. Sir Edward Watkin's new line to London, notwithstanding the amicable working agreement recently concluded, is not altogether acceptable to the Great Northern. The arrangement, in fact, is a modern example of the wisdom of "playing a waiting game." The day may come when the Great Northern, having made a territorial agreement with the East to West Railway Company, an agreement "as intricate as any partition treaty of a German princely house," and also arranged for an interchange of traffic, may run their passengers, goods, and minerals through Derbyshire into Lancashire instead of by Retford, Sheffield, and Penistone. But, after all, the Great Eastern promise to be the best friends of the new undertaking. Their interest in the cross-country railway is not altogether

unselfish; but it exists. They have put a quarter of a million of money into the line, and for this sum they will get a very satisfactory *quid pro quo* in the shape of



A THIRD-CLASS DINING-CAR (MIDLAND).

running powers into the Derbyshire coalfield, and the handling of the coal traffic at Lincoln instead of Peterborough, which means that the Great Eastern, while helping and benefiting the East to West Railway, will greatly increase their own coal-carrying earnings to London.

The cross-country railway will not assert itself from sea to sea without a good deal of struggling and

probably some trouble ;* but the promoters may, in the chequered career of the Great Eastern, find an encouraging example of ultimate triumph over obstacles that at one time appeared insuperable. It is unlikely that the East to West Railway Company, with considerable wealth at their back, will ever be reduced to the pecuniary straits of the Great Eastern, or rather of the Eastern Counties Railway, from which that system sprang. It has been the unfortunate lot of many an undertaking to be sold up by creditors ; but the cases in which railways have met with this ignominious fate are not very numerous. Parliament has stepped in and said that, however great the financial difficulty, the bailiffs must keep their eager hands off the line. But the prohibition did not obtain in the early life of the Eastern Counties Railway ; and one day there was a flutter in Shoreditch Station when the rolling-stock was seized for debt. The prospectus of a limited liability company is admittedly the most brilliant thing in English literature, magnificent in diction, and wondrous in its visions of prospective success ; but the promises held out to the shareholders of the Eastern Counties Railway were quite as extravagant. Speaking at the first general meeting in 1836, the chairman was confident they would obtain an enormous passenger traffic and get an ample return for their capital, adding that “ the enterprise rested on the broad and stable basis of

* The promoters of the line have temporarily abandoned the western section of the track, and the new railway, at present, has only been constructed from Lincoln to Chesterfield.

national utility." One shareholder said he should be bitterly disappointed if the concern did not yield a dividend of 22 per cent. ; and he was so overjoyed at the inestimable blessings that railways seemed likely to bestow upon mankind that he said : " I do believe I shall live to see misery almost banished from the earth."

It is not in the power of a railway company to perform a miracle of this kind ; but the Great Eastern have worked wonders since their scrip was a by-word and shareholders hastened to sell out. They have tried to oblige passenger and trader, and they have, on the whole, succeeded in the very difficult task. They do not look upon any sort of trade as too lowly. They will carry bones, soot, cabbages, herrings, anywhere on their system at a cheap rate ; and if you long for a sea-bath in your own room they will, for the modest price of sixpence, place on your doorstep, in any street or square in London, a can of sea-water that they have brought fresh and pure all the way from the breezy coast ; and they will call for the empty can.

Passengers often wonder what ultimately becomes of the carriages that escape the shock of collision and live to be very old, and become too feeble to run as a part of the modern train. Now and then they are converted into wooden huts by humble folk ; occasionally they are chopped into firewood ; but the Great Eastern Railway Company suggest a more general use for them, and whenever they have a stock of these vehicles on hand send out handbills offering to deliver cheap old railway-carriage bodies, " suitable for shelters, sheds,

tool- and store-houses, coalyard offices, and fowlhouses," at any station on their system.

A railway company ready to sell you a dwelling for a five-pound note, and to give you a sea-bath in your own home for sixpence, deserves to be encouraged; and certainly no great English line has made more rapid progress in recent years than the Great Eastern, which has now a capital of nearly fifty millions. In the year of amalgamation, the railway earned one and a-half millions sterling. In 1893 its earnings were over four and a-quarter millions. The increase in the number of passengers carried has been enormous in the thirty years between 1862 and 1892—from 7,500,000 to 83,000,000, exclusive of season-ticket holders. The traffic in livestock has developed less quickly; but there has been a marked growth of the general merchandise traffic, the goods carried now bulking to five million tons per year.

The company have about a thousand locomotives, and their trains run eighteen million miles a year. They carry everything in the shape of passengers and goods. They convey to Harwich people of every nationality; they take thousands of holiday-makers to the East Coast resorts, and many more to their daily toil in town. They are showing much enterprise with regard to ordinary passenger traffic, too—they are pushing northward. At one time the Great Eastern trains only ventured to Lincoln, then they made their way to Doncaster—now they run to York.* New


* The Great Eastern began running their trains to York on November 1 1892. The following day the Scotch express was wrecked at Thirsk, and on the first reports of the accident reaching town some of the Great Eastern

dining trains have been introduced on this service from Yorkshire to Harwich; and the carriages are remarkable in contrast with the old cattle-truck-like passenger carriages that ran coastward little more than a quarter of a century ago. Eighteen first-class passengers may sit down to dinner in the prettily-appointed dining saloon; and the third-class passengers are no longer expected to live by hazard. By means of gangway and corridor the waiter can bring them refreshments; and unless they prefer the excitement of the exploit they have no need on the arrival of the train at intermediate station to rush to the refreshment-room, and to eat against time, with one eye on a sandwich and the other on the number of their carriage. In their solicitude for the refreshment of the third-class passenger, the Great Eastern are not alone. The Midland Railway Company have attached third-class dining cars to their fast trains from London to the North; and the London and North-Western Company, determined to make their West Coast mail route as attractive as possible, have made similar provision for the hungry on their main line.

The Great Eastern carry flour, grain, and seed till their huge warehouses at Bishopsgate and Spitalfields are congested with the produce of the field; they bring into their stores in Goodman's yard vast quantities of bacon, butter, and cheese from the Continent and from America; they convey many thousand head of cattle to the great market at Norfolk and to Tufnell Park for shareholders, with an elastic knowledge of the topography of Yorkshire, were much perturbed, thinking the accident had happened to their train, and that it was, in the words of one of them, "a — fine start!"

the feeding of London ; they not only run into town the gathered crops from many a Cambridgeshire farm, the make of many a noted dairy, the fruit from many a fine old orchard, but they also shoulder the perennial harvest of the sea, sending from Yarmouth, Lowestoft, and Harwich trainload after trainload of fish—of herring, cod, sprat, shrimp, and oyster. The Great Eastern in fact carry nearly everything that the sea gives up as food, that the land yields, and that industry produces. They bring coal for the London housewife's fire ; they bring cockles for the costermonger's supper ; they bring gaily-painted swing-boats from Lynn for the village fair ; and they carry from the Norfolk mills to Printing House Square the great rolls of paper used for the *Times*.

The running of workmen's trains has long been a difficult problem with railway companies. There are some things these great carriers are not bound to do. They are not compelled to convey a person who is intoxicated, or insane, or suffering from an infectious disease ; but they must, if the Board of Trade puts up its little finger, run workmen's trains. The prosperity of the country depends upon the industries of our great cities ; and the worker must have quick and cheap facility to go to and from his toil. The Select Committee that considered the working of the Artisans' Dwellings Act, recommended "That the obligation placed upon the Eastern Counties system of railways out of London to provide trains for artisans at the rate of one penny for each passenger per course of seven or eight



miles should be extended to other suburban railways as opportunity may offer." The railway companies with termini in London all provide workmen's trains ; but they scarcely relished the recommendation that they should carry the artisan and the labourer at less than a farthing a mile.

The working-man has not altogether lost his worship of St. Monday or his taste for beer, but he is in the main shrewd, thoughtful, well-informed, takes an intelligent interest in his own welfare and the progress of the country ; and though perhaps a little too sensitive on the question of overwork, determined to divide the day into eight hours work, eight hours play, and eight hours sleep, he is a good and sturdy citizen, with whom statesmen dare no longer merely coquet, for by his vote and his trade-union he has great power in the land. The Earl of Warwick could make and unmake kings ; but the working-man can make and unmake governments. He holds the very life of the nation in his rough hand ; for he can either maintain our industrial supremacy or wreck it. Altogether he is a very different person from his predecessor of half-a-century ago.

The railway companies formerly ignored the working-man. He was too cheap, too dirty, to carry. The deep-sided waggon, seatless and roofless, depicted by John Leech in his humorous sketch of early railway travelling, was considered almost too luxurious a vehicle for the artisan and the labourer of the time. But the Cheap Trains Act, passed in 1883, aroused some interest

in the subject in nearly every railway director's breast, for the Act set forth that proper and sufficient workmen's trains must be provided at such times and at such fares as the Board of Trade deemed reasonable and necessary. Perhaps of all the railways running into town the Great Eastern placed the most generous interpretation upon the Act. Indeed, the London County Council, making special inquiry, in 1892, into the service of workmen's trains in London gave this company the position of honour as carriers of the industrial community. "The Great Eastern," they said, "is especially the workmen's London railway—the one above all others which appears to welcome him as a desirable customer, whose requirements it accordingly makes the subject of special study and provision to an extent and in a variety of ways that no other London line seems to do." Next in excellence came the London and Brighton Railway: "The service is undoubtedly a very fine one, not only as regards the number of trains, but also as to the suitable times and intervals at which they are run, the limit of time over which they extend, and above all in the absence of almost every kind of restriction by which other companies hamper the holder of workmen's tickets. The generous and enlightened policy of the company in regard to workingmen stands in marked contrast to that of some others, and might well be made an object of emulation by most of them."

The South-Western apparently dealt with the problem in some cases with a spice of humour, though the



HARWICH.

(From a Photograph by Payne Jennings, Ashlead.)


spirit of frolic in which they indulged must have been rather tantalising to workers anxious to get to their toil and home again. "There are on this railway,"

explained the report, "some curious anomalies that must cause inconvenience to working-men. To fifteen places workmen's tickets are not issued from Waterloo, but are to it; to three places—two of them within the Metropolitan area—workmen's tickets are issued from Waterloo, but not to it." Nevertheless the South-Western were more liberal than the London and North-Western and the Great Western. "Both these lines," the report asserted, "touch Willesden Junction, and probably no part of the area of suburban London is so poorly provided with workmen's trains as the district around this junction." Many a weary workman, who has perhaps been up all night with a sick child, and been obliged to leave home at dawn to reach his work punctually, could no doubt emphasise this opinion, for there is this significant statement in the report: "A police-constable at Ealing says that he has to call workmen as early as 3.30 a.m., to enable them to walk to Shepherd's Bush—a distance of four miles—the nearest station at which they can get a workmen's train to take them to London. This also occurs at Acton and Hanwell; in the latter case the distance the men have to walk being stated to be about six miles."

Since the London County Council spoke so strongly in favour of the better provision of workmen's trains the inequalities both of service and of fare have been to some extent removed. The London, Brighton and South Coast Railway now permit the holder of a workman's ticket to return by any train; and the Metropolitan Railway Company amended their workmen's

fares on June 1, 1892, adopting the following scale: for a distance of five miles and under, 2d.; from five miles to 10 miles, 4d.; from 10 miles to 15 miles, 6d., including return in each case. The Manchester, Sheffield and Lincolnshire Railway Extension to London Bill was ordered in the House for the third reading on the understanding that the same fares for workmen would be charged on that line; and the spirit of competition, the perseverance of hon. members in the House and out of it, the pressure of Parliament, and in some instances a more liberal interpretation of the Cheap Trains Act, seem likely to result in a comprehensive and equable system of workmen's trains that cannot do otherwise than greatly encourage and benefit industry, for the mechanic, no longer obliged to trail from distant suburb to workshop, will reach his bench, his lathe, or his anvil unjaded, vigorous, and ready, with his heart in his work, for his day's toil.

Under the influence of the railway, industrial life in town is rapidly changing. The London apprentice, a sturdy figure in history, play, and fiction, does not always house with his master; the cutler no longer, as in Elizabeth's reign, lives on Fleet Bridge, above his quaint shop in which he made fine knives; the worker in gold and silver, the handicraftsman of every sort, has made his home far away from the scene of his work; and the Cheap Trains (London) Bill, introduced by Sir J. Blundell Maple in 1893, and referred to a Select Committee of the House of Commons, sought to give the artisan more facility for getting into the fresh air of the



country. It aimed at establishing on every railway having a terminus in town the rate of workmen's fares already adopted on the Metropolitan, though its promoter, in his zeal for the bread-winner, yearns for the zone system, such as obtains in Hungary, where you can travel, third-class, fifteen miles for sixpence, twenty-five miles for one shilling, and thirty-four miles for eighteenpence.

Mr. Mundella considered the Bill in some respects unworkable, holding that it would lead to congestion and crowding of trains, and in some cases actually increase the fares, whereas it was desirable that workmen's trains should be kept as cheap as possible if they were to be useful. There could, he added, be no doubt as to the value of a convenient system of workmen's trains; but he asked why the advantage should be confined to London? Why should not Glasgow, Manchester, Birmingham, and Sheffield share in it? The debate on the second reading yielded interesting information. In 1883 there were only twelve workmen's trains daily out of London. Now there are one hundred. But the Great Eastern trains are the most generous. They run willingly beyond the provisions of the statute; and on one track cheerfully convey the working-man $10\frac{3}{4}$ miles each way for twopence!

At the spring meeting of Great Eastern shareholders in 1893, Mr. C. H. Parkes,* the chairman of the company,

* At the July meeting the same year, Mr. Parkes, who had held the position of chairman of the company since 1875, resigned, owing to failing health, and was presented with two thousand guineas, Lord Claud Hamilton, the new chairman, remarking that the sum in no sense represented their high

mentioned the self-evident fact that the suburban population of London was enormously increasing; and he added that the enlargement of the Liverpool Street Station, and the lines leading to it, was necessary to maintain their position with regard to this suburban traffic. They saw no possible end to the extension of this traffic. It was their intention to divide their suburban lines into sections, to increase the number of their suburban trains, and to isolate the working-class from the general traffic.

The Eastern Counties Railway found it necessary, as far back as 1844, to adopt the narrow gauge, and the Great Eastern, since acquiring the line, have continued altering and extending their track, to the amazement of those who remember the company in the days when the property threatened to be their ruin. The Great Eastern have in Parkeston Quay a golden portal to the Continent. They are hotel proprietors and ship owners, and their fleet, that plies to the Dutch and Belgian coast, now includes as many as nine twin-screw boats, hardly inferior in their way to an Atlantic liner—the largest of them being the *Amsterdam*, the *Berlin*, the *Vienna*, and the *Chelmsford*, each of which will not only comfortably accommodate two hundred passengers, but run them across the sea at the speed of $17\frac{1}{2}$ knots per hour. But with all this enterprise and development, the most sanguine shareholder

estimate of him. It was simply a small expression of their good feeling towards one whose administration had raised the position and credit of the company until they now ranked among the first-rate railway companies of the kingdom.

never imagined that such a great change would be made in the London terminus of the railway—that Liverpool Street Station, opened in November, 1875, would be practically reconstructed at a cost of two and a-half millions sterling ; that there would be six lines into it, a crowd of suburban trains running in and out of it, a vast flow of traffic not only by the old Continental ways, but on the new route from London to Berlin by Harwich, the Hook of Holland and the Schiedam line ; and that, as was shown by a recent count, no fewer than ninety-two thousand passengers by the local services alone arrived and departed from Liverpool Street Station in one day.

CHAPTER XIX.

THE GREAT WESTERN—THE END OF THE BROAD GAUGE.

The Great Western Track—The Expansion of Paddington—A Big System—Coal at Cardiff—Passenger Traffic—A Very Respectable Railway—Stately Travelling—A Hasty Engine Driver—The “Cornishman”—Sleeping Cars—Spring Flowers in Great Cities—A Delightful Land—Tons of Narcissi for Covent Garden—An Island Paradise—Brunel as an Engineer and an Acrobat—A Remarkable Man—Some of his Viaducts—The First Atlantic Steamship—On Board the *Great Eastern*—A Humble Hero—The Cable to Heart’s Content—Rails of Wood and Rails of Steel—Bidding Adieu to the Broad Gauge—Quick Railway Work—Narrowing the Road—Incidents of the Conversion—The Cost and the Advantage—Promised Improvements.

THE Great Western Railway, one of the first built of our lines, is one of the best made and most shrewdly administered. It stretches away from London to Bristol. It goes down to Weymouth, and has a boat-service to the Channel Islands. Devonshire and Cornwall it looks upon as its own land, and it strikes away to Barnstaple in the west, to Exeter and Torquay in the south, and on to Plymouth, Falmouth, and by boat to the flower-growing Isles of Scilly. The great line makes it way north to Gloucester, Birmingham, Chester, Liverpool, and Manchester; and through the Severn Tunnel, has easy access to Wales and quicker communication than formerly with the great trade and industrial centres of Lancashire. The railway has a clean run through South Wales from Newport to Milford, opening out traffic to Waterford and Cork; and is steadily finding its way northward through the Principality. Some

day there may be a big fight for railway supremacy in this little land, so noted for its scenery, so lavish in its language, and so fiery with political zeal. The Taff Vale and the Cambrian Railways will probably become

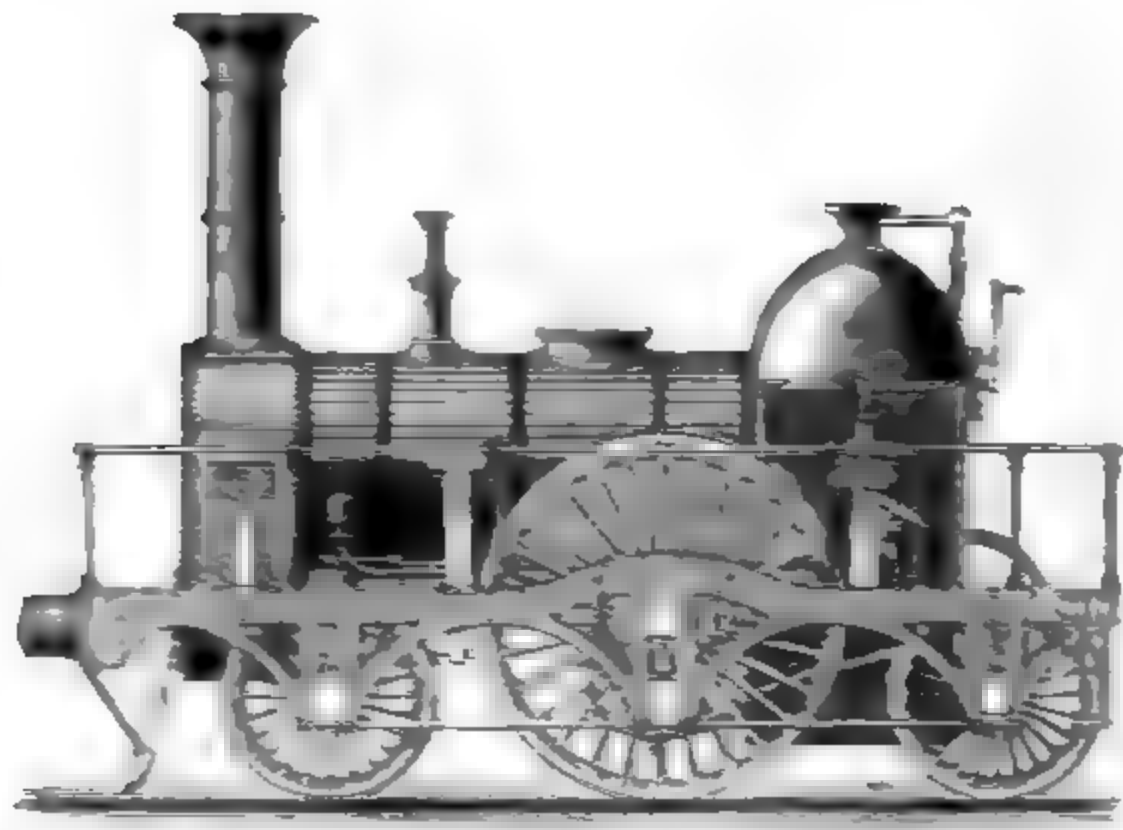


PADDINGTON STATION IN 1845.

the property of or be effaced by the Great Western and the London and North-Western, and these two systems may fight each other or remain friends to check the aggressive spirit of the Manchester, Sheffield and Lincolnshire Company, who have no intention of confining their lines to the Wirral peninsula, but mean to get down to the rich coalfield that has made Cardiff and Swansea, and created the docks of Bute and Barry.

The Great Western renews itself at Swindon; and

places with the most vigorous life at Paddington. "A village situated on the Edgware Road, about a mile from London," was the quaint description given of Paddington at the beginning of the century, when only



A GREAT-WESTERN LOCOMOTIVE WITH PORTER FIRST-CLASS COACH.

one stage-coach ran from the hamlet to the city, and the guard told tales and played the fiddle on the way. But the railway came, and then the terminus, and about the iron-track clustered many buildings. London crept up to Paddington and embraced the village. The once quiet suburban quarter is now seldom free from the hurry of people and the roar of traffic: and the daily scene in this busy part of the great city is in curious contrast to that in 1801, when the first barge, laden with passengers, moved slowly along the Grand Junction

canal into Paddington basin, amid the ringing of bells and the flaunting of flags.

The railway, then a broad-gauge line, was opened from London to Bristol on June 30, 1841, and its estimated cost was five millions. Now the track has extended by amalgamation and additional construction till it is 2,500 miles in length, and the capital of the company has increased to eighty-three millions. The Great Western have enormously developed their traffic in passengers, merchandise, and minerals since the early days when they ran the notable engine facetiously christened the "Emperor of Russia," because of its "extraordinary capacity for the consumption of oil and tallow." The increase is particularly noticeable in the mineral traffic, and "is attributable to the larger shipments of steam coal at the ports to which they carry." The tourist, simmering in the sunshine on the Welsh coast, feels a keen interest in the great merchantman as she sweeps proudly by on her way to some South American port; but he does not take the trouble to raise his field-glass to look at the dirty steam-collier that puffs and screams northward or westward; yet the collier, without a line of beauty to recommend her, is relatively of greater value than the big ship, for she does not merely carry the produce of toil, but the motive-power of wealth. The Great Western, the London and North-Western, and the Midland, as well as the Welsh railways, have direct communication with the Bute Docks at Cardiff, and the yearly export of steam coal from the great

wharves amounts to seven million tons. The Barry Dock, a few miles westward, sends out four million tons of steam coal annually, and has quite a modern method of shipping it direct from the truck into a shoot by means of a tipping-table, worked by hydraulic rams.

The Great Western carry some sixty million passengers a year, and their annual revenue receipts from all sources are creeping towards nine millions. But their passenger traffic sometimes plays remarkable tricks with them. One half-year they find they have carried a smaller number of passengers and earned more money: the next half-year that there is a great increase in the number of passengers and yet the receipts have shrunk. A singular evidence of the freak of travel was given by the traffic of the second half of 1892. The passenger receipts were less by £27,000: yet the company carried 26,000 more first-class, 16,000 more second-class, and 557,000 third-class passengers than ever. "What—what!—what's this!" exclaimed the giddy and perhaps irascible shareholder, reading the report again in perplexity. It looked as though the directors, wearied with such subjects as percentage and train mileage, had decided to indulge in a little fun with the proprietors by the introduction of a *conundrum*. The explanation was not difficult to find, however. The company, while carrying many more passengers, had taken them shorter distances: in fact, they had conveyed no fewer than 660,000 passengers to "Venice in Olympia."

Tough active and enterprising in its maturity, the

Great Western is "the fine old English gentleman" among railways. It has always been highly respectable, and has conveyed its passengers handsomely. In 1846, when Paddington Station had only a prim, unornamental façade, and trees, and flocks of sheep, and clumsy old coaches near its doorways, Mr. Bourne wrote a history of the railway, then only five years old, remarking upon "the great proportion of first-class intermediate traffic, and of persons travelling on the line with their private carriages"; and even now the company derive a not inconsiderable portion of revenue from the transit of carriages and horses. People have always journeyed in comfort on the broad-gauge line in the roomy carriages, spacious as the clergyman's post-chaise that took Dr. Johnson along the pretty country highways about Ashbourne.

Though the Great Western trains travelled in such stately guise, they did not go with stately step, but rather with flying feet. While the width of the gauge was vexing the railway world, the eight-feet-driving-wheel engines placed on the line by Brunel and Gooch made many a speed record. In fact, the express often ran from Paddington to Didcot, a distance of fifty-three miles, in times ranging from $47\frac{1}{2}$ minutes to 50 minutes; so that the old familiar saying, "We went more than a mile a minute," is not founded on fiction. There is, on the outbreak of any great war, quick engagement and departure of war correspondents to the front; but before the journalistic campaigner starts on his perilous mission he has an interview with

the managing editor, and an agreement that in case of "accident"—that is, if he happens to be shot—there will be ample provision for his wife and family. In the old days of Great Western fast-driving the company were asked to enter into a similar agreement. "The tradition still lingers at Paddington that a driver solemnly submitted to the directors a proposal that *if they would look after his wife and family* he would take his engine to Bristol, a distance of $118\frac{1}{2}$ miles, within the hour!"

The Great Western trains do not fall asleep by the way now, for Mr. William Dean, the locomotive superintendent of the Great Western, writing to the author some months back, says: "The winter service of trains is now in force, but there are nine trains daily between London and Swindon, up and down, which run between these stations at an average speed of $53\frac{1}{4}$ miles per hour, the loads varying from five to ten eight-wheeled carriages. The train which covers the distance between London and Plymouth in the least time is the 10.15 a.m. from Paddington, generally known as the 'Cornishman.' This train runs from Paddington to Plymouth, North Road, in 5 hours 38 minutes, with three intermediate stops—Swindon 10 minutes, Bristol 7 minutes, and Exeter 8 minutes—distance, 246 miles; running time, 5 hours 13 minutes; average speed, 47 miles per hour. Other trains run at the same speed, but have more intermediate stops. The principal express trains between Paddington and Newton Abbot are worked by engines with 7 feet 8 inch driving wheels, cylinders 20 by 24 inches."

In October, 1892, the company, for the convenience of passengers travelling between London and Cardiff, and other stations in South Wales, commenced



THE DOWN DUTCHMAN (ON THE RIGHT) PASSING ACTON AT FULL SPEED.*


(From an Instantaneous Photograph by J. A. C. Branfill.)

running a first-class sleeping carriage on the night train, and also placed a similar carriage on the early morning train from New Milford to Paddington, bringing passengers arriving by boat from Waterford. About the same time they accelerated their service between the Channel Islands and town, putting on a special boat-train between Weymouth and Paddington, and enabling passengers leaving Jersey in the morning to reach

* The narrow gauge system is seen on the left, and the mixed gauges on the right.

London at seven o'clock the same evening — the journey by sea and rail being done in ten and a-half hours.

Railways have no doubt done much to make great cities hideous. The ugly bridge across Ludgate Hill, and the equally repugnant structures across the fine old thoroughfare Friargate in Derby, the Wicker in Sheffield, Briggate in Leeds, and Oxford Street and Strangeways in Manchester, all have a tendency to make the lover of the beautiful angry. Nevertheless, the railway does something towards making great cities brighter in the dreary winter time, when the streets are coated with mire, and the air is thick with fog and soot, and the mind is depressed and the lungs are clogged. It is then that the itinerant flower-seller reaps his harvest. In the third week in January, 1893, there was only one hour of sunshine in Manchester. The only brightness in the muggy streets was brought by the spring flowers. There was mud on the pavement, in the gutter, and on cab rank; but in St. Ann's Square, the fashionable lounge of the city, and the haunt of the masher, the kerbstones were gay with flowers. These were poised on trays by shabby-looking men, who cried in voices more or less musical, "Fine vi'lets—sweet smelling vi'lets—all mornin' gathered;" or "Nice-cisses, come with the dew, only sixpence, lady." How did these delicate flowers find their way into a city that poisons the hardiest trees with its breath? They had come by train through the night from the south. It is amazing what an enormous bulk of flowers, fruit, and



vegetables are now sent North by rail from the gardens and fields of the West and South of England. One of the most curious developments of modern traffic is that done in watercresses from Chesham, the picturesque little place in Bucks. Out of the great beds that stretch across the valley supplies of "bright and fresh fine water cre-soes" are sent to many a London breakfast table. Special vans even are built for their transit; and some of these are slipped on to the Midland Railway for their long run to the markets of Manchester and Liverpool. But the narcissus loads of the Great Western are even more surprising.

The company's trains go through a land rich in scenery, by breezy upland and deep dale, and orchards beauteous with blossom; by crag and chasm and sheltered cave, and old-world fishing village. They go through a country rich in folk-lore; a country, too, in which Charles Kingsley encouraged the manly spirit by his robust character—his love of truth and courage and uprightness. There is even a glimpse of the poetic in the company's goods traffic, for in addition to carrying fish, and farm produce, and agricultural machinery, and the outcome of textile industry, they bring the lovely flower that, according to classical tradition, grew out of the blood of Narcissus, the handsome youth whose love-folly was punished by Nemesis. The flower that was christened in Thespis thrives in its island home that is lashed by the Channel surf, and yields, to say the least, house-rent and pocket-money to the humble folk who tend it; without a

thought of the association it has with the nymph's shadow in the fountain.

The export of narcissi from the Scilly Islands in 1892 was three hundred and thirty tons. During February, 1893, no fewer than one hundred and eighty-two tons of these delicious flowers were sent to Covent Garden and other markets, and it was estimated that the year's export would exceed four hundred tons. The islanders have a grievance against the Great Western Railway with regard to the transit. Mr. Dorrien Smith, "the King of Scilly," says: "One of our chief difficulties has been in getting the flowers rapidly to market. They all have to be carried by mail train, and our Great Western mail is a curiosity for the end of the nineteenth century. It takes $11\frac{1}{2}$ hours in doing the 328 miles to London, or $28\frac{1}{2}$ miles an hour. It is so long and cumbersome that it often has to stop twice and three times at a station. It has been made half-an-hour slower since the summer of 1892, so all letters from the West of England have to start half-an-hour earlier than they did."

One of the old-fashioned black portraits that obtained before the discovery of photography, presents the younger Brunel as rather a debonair, careless gentleman, with his hands in his jacket pockets and a big cigar in his mouth. There really does not seem much work about him; and his most conspicuous characteristic is a long stove-pipe hat, that would have gladdened the heart and turned the brain of any African king, now it has become the custom of these sable monarchs to go

out to battle "curiously arrayed in war paint and top hats." But his life was marked by resource, unflinching determination, and incessant effort. There was a singular instance in it of originality of mind and body. He was fond of children, and never found the task of amusing them irksome. He would, had it been possible, have imitated the yawning hippopotamus on the Congo, and turned himself inside out to please them. As it was, he had to turn himself upside down at an age, between thirty and forty, when most men, however athletic, have abandoned the pastime of standing on their heads and making cart-wheels. One day he mystified a group of children by swallowing half a sovereign and bringing the coin out of his right ear; but, like most conjurors and wizards, he came to grief. Emboldened by his success, he flung the piece of money



ISAMBEARD KINGDOM BRUNEL.
(After the Portrait by J. C. Horsley, R.A.)

into his mouth with a little too much force ; and instead of coming out of his ear it slipped, to his dismay and the children's wonder, down his throat, and hid itself in his chest. Financial embarrassment is generally productive of pain and misery ; but few people have suffered from this remarkable form of it, and it gave Brunel a great deal of trouble. Acting on surgical suggestion and his own engineering experience, he repeatedly turned himself upside down, coughing meanwhile, and was gratified at last to feel the half-sovereign roll out of his lungs and into his mouth, and to see it fall upon the floor, apparently anxious to get into circulation again.

Brunel was a remarkable man in many ways. In his day insomnia was seldom mentioned ; but this noted engineer, like the modern journalist, had rare capacity to do without sleep. During the making of the Thames Tunnel he often worked day and night without drooping, or even showing the slightest trace of fatigue. When engaged in the noted broad-gauge fight, and in constructing the difficult but grandly solid line, the Great Western, over hill, across dale and wide-stretching water, to the feet of Cornwall, he scarcely knew relief from duty, and strove so indomitably that he got his own way with regard to the breadth of gauge, and evolved from his engineering genius the great bridge, with its nineteen spans, across the Tamar at Saltash, and also the celebrated Cornish viaducts.

There was no jerry-building about his work, and the Thames bridge at Maidenhead, widened early in 1893,

was found to be as solid and strong almost as on its erection years ago. He had, like most men, curious whims, and his recommendation of the application of the atmospheric system on the South Devon Railway was one of them ; but his life was instinct with courage, perseverance, and earnest work. Many men would have been disheartened by his early experience. In 1829 his design for Clifton Suspension Bridge was rejected ; but he kicked disappointment out of his path, went to work again, and produced another design that was accepted with admiration, and on which the present bridge was fashioned. Before he reached the age of thirty he held the responsible position of engineer to the Great Western Railway Company ; and not satisfied with line-construction alone, sought to extend the system in a manner that startled some of the old-fogey shareholders. They readjusted their glasses, reperused his scheme, laughed at his daring, and with their chins buried in the high collars and black satin stocks of the time, said : “ By Gad ; the young fellow will be taking us to the moon ! ” His idea was not quite so bold as that ; but he urged the shareholders to make their line a little longer by running a steamboat from Bristol to New York. In these days of triple-expansion engines and Atlantic greyhounds the project does not strike one as extravagant, but when in 1835 Brunel made the suggestion it met with a good deal of ridicule. Still many shareholders had faith in him, and he built the ship. It was styled the *Great Western*, was the largest steamer then afloat (although much smaller than the

Great Eastern, which he built many years later), and is said to have been the first steamship built to make regular voyages across the Atlantic.

When a youth, the author received from a friend a parcel containing what an Irishman might have



THE MAIDENHEAD RAILWAY-BRIDGE. (Page 410.)

mistaken for a piece of thick twist. He thought, with his mind then inclining to geological study, that it was part of a fossilised tree-branch; but it was really a bit of the first Atlantic cable, obtained on the deck of the *Great Eastern*. Some years afterwards the vessel lurched into the Mersey, and he scrambled on board the boat from a tiny tug, and roamed about the floating city, wondering at its butcher's shop and blacksmith's forge, and at the big, brilliantly-appointed state-rooms,

scarcely taking as a joke the middy's suggestion that they should play cricket on the deck, and little dreaming that the monster was destined, after its chequered and unwieldy career, to be broken up, like an old hulk, on the Mersey side.

The vessel was at once Brunel's joy and despair. He designed and built her, and was full of pride that he had at last created the monarch of the sea. But the disaster on her trial trip unnerved him, and hastened his death. When the big ship was off Hastings, on September 5, 1859, she was shaken by a fierce explosion, and ten hands were killed. There was only one gleam of consolation in the piteous accident: it produced a hero. In the crash of wreckage and the hiss of escaping steam, the pilot was warned of his peril; but he stuck to his post, saying: "I'm no engineer. I'm a pilot. I've charge of the ship, and I mean to stick to her." Brunel took the disaster keenly to heart, and it is said that the mental shock of it brought on the paralysis from which he died a few days after the ship was towed into Portland Harbour.

It was Brunel who recommended Gooch to the Great Western Company; and the clever mechanical engineer, who was made superintendent of the locomotive department, and ultimately became chairman of the company, was also closely associated with the *Great Eastern*. Along with other capitalists he bought the vessel "for a song as a cable-ship, and with her aid he laid the first practicable cable across the Atlantic." How he did this Sir Daniel Gooch describes in his own

Diaries. In 1866 he carried the American end ashore at Heart's Content—surely a fortunate spot!—and says : “The old cable-hands seemed as though they could eat the end; one man actually put it into his mouth and sucked it. They held it up and danced round it,

cheering at the top of their voices. It was a strange sight nay, a sight that filled our eyes with tears.”



SIR DANIEL GOOCH.


(From a Photo by Hills & Saunders, Sloane Street, S. W.)

The railway track, with its range of creosoted sleepers, and gleaming rails, winding through grass-grown cutting, seems to the uninitiated a very simple and easily-constructed pathway; but it is not made without

enormous cost, and there is a great deal of curious fact connected with the laying of it. The permanent way of every important railway undertaking in the country has been subjected to alteration, improvement, and extension. The old wooden tramways that were used for years before Mr. Pease expressed the opinion “that the railway would become the king’s highway” are forgotten. The cast-iron rails that formerly obtained on our railways have been discarded, and wrought-iron

rails have met with a similar fate. Nor has the grave suggestion advanced in 1831, that rails should be made hollow and filled with hot water in winter to operate against the effects of the frost, been adopted. In 1860, Mr. Bessemer predicted that "as the age of iron had superseded the age of bronze, so surely would the age of steel supersede the age of iron." Two years after this utterance steel rails were laid down at Rugby, Stafford, Crewe, and Campden, and soon proved that they could resist wear and tear far better than iron. The manufacture of Bessemer steel rails has become a great industry. Nearly every railway in the country has them in use. They have been exported in considerable quantities to many a country in Europe, to the Colonies, to our Indian possessions, to China, and to Japan, and will in a few years carry our goods and our civilisation, with its good and its evil, into the heart of Africa.

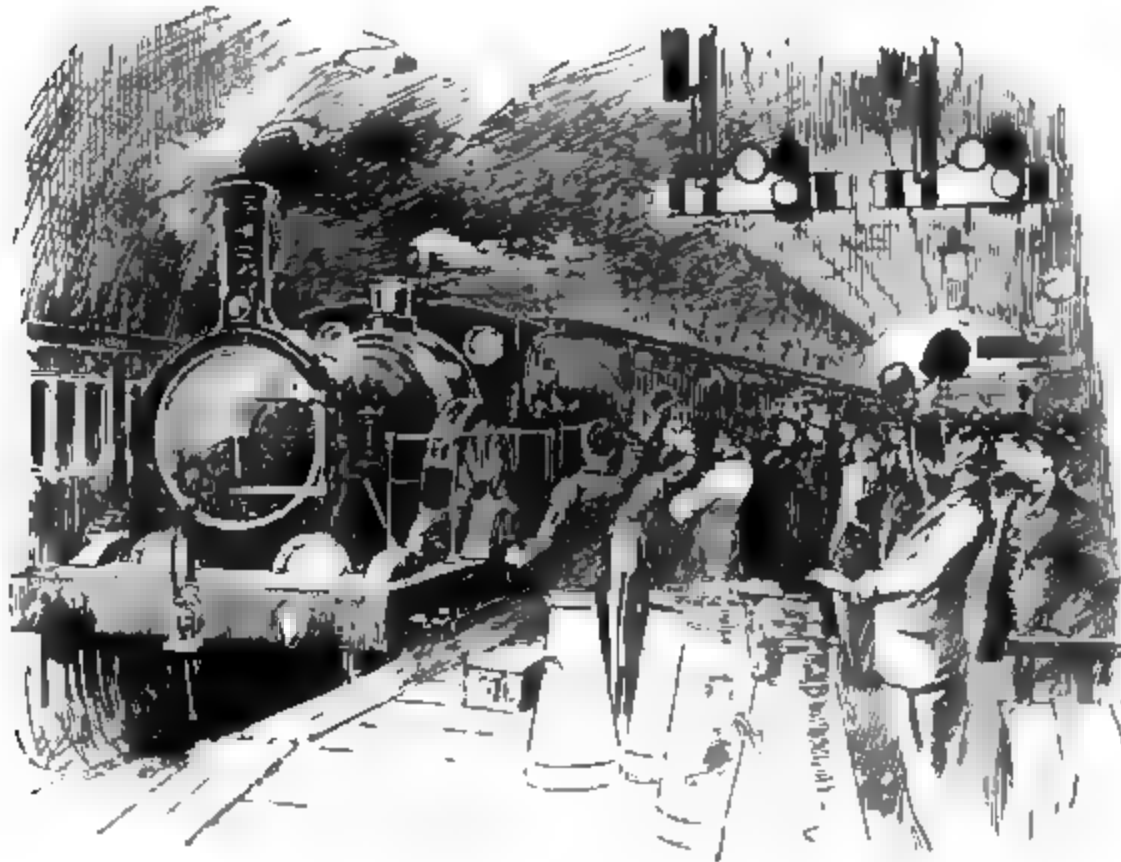
The Zanzibari will not be troubled, however, with such problems as disquieted the early makers of English railways. They will not need to scratch their heads in wonder as to why "the western rail creeps more than the eastern rail, or why every train running north and south is pulled over, and presses the one rail more heavily than the other." The reason has already been found out. The train, no matter what its rate of speed, has to bend to a greater velocity, and inclines towards the east, as it "is dragged after the whirling globe." Nor will the dusky native prince, proposing to run a line through the forest, find it necessary to



perplex himself about the gauge. That difficulty has also been solved by experience. The coal tramroads of the early part of this century were 5 feet in width. The gauge of the Liverpool and Manchester Railway was 4 feet 8½ inches. Brunel, the engineer, much to the surprise of George Stephenson, succeeded in introducing a 7-foot gauge on the Great Western Railway. In Scotland a gauge of 6 feet 2 inches was preferred. On the Irish lines there was at first an entertaining variety of gauge. Twenty-five miles of the line from Belfast to Dublin was made on the 6 feet 2 inches scale by the Ulster Railway Company; the connecting line of the Drogheda Railway Company had a gauge narrower by a whole foot. Meanwhile, the narrow gauge was widely adopted in England. The lines of George Stephenson's make threw out their tendrils north, south, and east, and before long a great narrow-gauge system was developed.

The broad gauge, it was soon found, was the most costly, in land required for double lines, in cutting, tunnelling, and bridge work; but the Great Western clung to their fad. "For some years after the opening of their Bristol line in 1841," says one writer, "all went well. The Great Western Railway served a vast territory, over which it claimed a monopoly. Competition in the railway sense was non-existent, and the travelling public preferred the roomy broad-gauge carriages to the more cramped compartments on the other lines. It was on the opening of the Bristol and Gloucester Railway in 1845 that the fallacy of the

broad gauge first became evident to its promoters. Gloucester Station speedily became one of the most important junctions in the country. It was here that the lines from the North, and the South and the



THE LAST BROAD-GAUGE TRAIN LEAVING PADDINGTON.

Midlands met. It was here that the broad- and the narrow-gauge systems became united. Gloucester Station became a pandemonium. So soon as a train arrived it was pounced upon by an army of porters and assistants, who emptied the goods- and luggage-vans of their contents previous to transferring them to the other train. Much time and temper was lost, and the jostling was frequently a source of danger to life and limb. The 'break of gauge at Gloucester' became a

favourite subject for the humorist. It was treated by Thackeray in *Punch*. It formed the topic of a score of pamphlets, and was characterised by a Royal Commission as 'a national evil.' After remaining obstinate for nearly thirty years, the company began in 1869 to profit by the lessons of their unlucky hobby. In that year it was decided to relay the line on the narrow-gauge principle, the work to be commenced forthwith and proceeded with until completed. The first portion taken in hand was the section between Gloucester and Hereford. This accomplished, other portions of the Birkenhead and Welsh branches were in turn dealt with; until in 1889 only 426 miles out of 2,500 were broad gauge; while of these 163 were available for narrow gauge as well."

The directors in 1891 made this significant announcement: "Having come to the conclusion that the entire discontinuance of the broad gauge is unavoidable, and that the conversion of the railways of the company in the West of England from the broad to the narrow gauge cannot be longer postponed without detriment to the interests of the company, we have determined to carry out the conversion in the spring of 1892. Although the disappearance of the broad gauge will undoubtedly be regretted by many travellers in the West of England, we are satisfied that the facilities for the conduct of traffic which a uniform gauge will afford, and the gradual extension of double narrow-gauge lines in districts where at present single broad-gauge lines only exist, will be appreciated by the public, and that the

economies which must result from the maintenance of one system of permanent-way and of rolling-stock will be attended with advantage to the proprietors."

The Chard branch, which was the only line east of Exeter remaining solely broad gauge, was converted to the narrow gauge at the time the report was issued; and a vote of £250,000 was obtained for substituting the narrow gauge and widening the line between Taplow and Didcot. It was reported at the meeting in the first half of 1892 that considerable progress had been made with this work, and that three-fourths of the passenger-stock had been so constructed as to be readily convertible to the narrow-gauge line. The chairman, no doubt with a lingering fondness for the broad gauge, held that it was best suited to the comfort of the travelling public, "who now required dining- and sleeping-saloons, and other luxuries such as could be obtained at a West-end club;" but he said the change of gauge had become imperative, and he should be very much astonished if they did not run with the same punctuality their long-distance trains, such as those to Penzance and elsewhere.

The last Cornish broad-gauge train, drawn by the engine "Great Western," left Paddington Station at quarter past ten o'clock in the forenoon of May 20, 1892. The station was crowded with spectators, and many passengers entered the carriages to run down to Swindon for the sake of the memorable trip. The directorate waved a regretful adieu to the train as it went out, and it left the platform amid the cheers of

the people. The last broad-gauge train quitted the station in the evening; and for the next two days a remarkable scene was witnessed on the broad-gauge line west of Exeter. All traffic was suspended, and the track was thronged with navvies and rang with the sounds of labour.

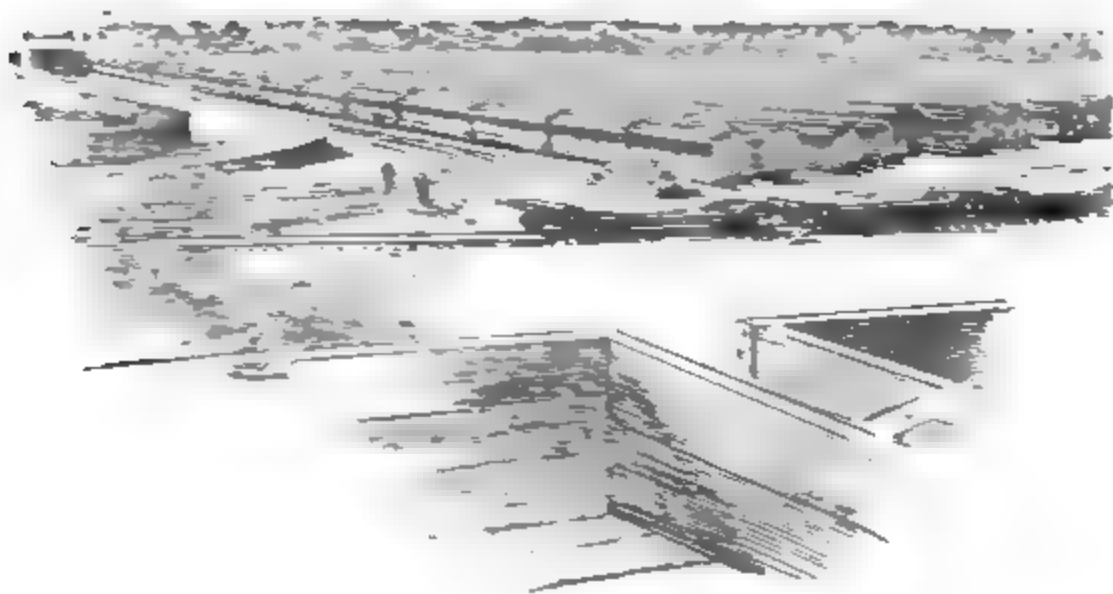
A special notice of the proposed alteration of the track from broad to narrow gauge on the main line between Exeter and Truro, and on the adjoining branch lines, was issued by Mr. Lambert, the general manager. It set forth that the 9.0 p.m. train from Paddington to Penzance on May 20 and May 21 would not be run on the Great Western line west of Exeter; and that the 5.0 p.m. train from Penzance to Paddington on May 21 and May 22 would not be driven along its old path, but that arrangements had been made for working these trains between Exeter and Plymouth *via* the London and South-Western line, and that passengers would be booked by them to and from North Road Station. Other mail train alterations were indicated, and the significant announcement was made that there would be no connection with these trains to or from Mill Bay Station at Plymouth. Intimation was given that the company would be unable to accept goods for transit at broad-gauge stations west of Exeter for some days prior to the commencement of the relaying work; but they were bound to carry her Majesty's mails, though they did not do it by rail, running a steamer on the two line-blocked days between Plymouth and Falmouth, and giving passengers, who had any

liking for a breezy journey by sea along the pleasant South Coast and into the picturesque old harbour of Falmouth, the opportunity of booking from port to port.

At Swindon, the great locomotive-building and carriage-making works of the company, an adroit method of changing the rolling-stock from broad to narrow gauge was adopted. Many of the carriages had been built of narrow-gauge width; but, till the time arrived when it was considered politic to abolish the wide line altogether, had been running on broad-gauge bogies. These carriages, doing duty almost till the time of the temporary closing of the lines, were collected on the sidings, sent methodically into the works, placed as quickly as possible in the changing shed, and fitted with narrow-gauge bogies. The *modus operandi* was ingenious. The shed had a movable floor. When a carriage was run in, the body of it was raised clear of the bogie frame and propped up. The part of the floor bearing the broad-gauge bogie was then lowered, and the wide set of wheels moved clear away underground. A narrow-gauge bogie was then placed on the movable floor, lowered, passed beneath the carriage, and fitted to it so deftly that the change from broad to narrow carriages, so far as the coaches were concerned, was carried out—with the giant, tireless aid of hydraulic power—in half-an-hour.

On the line, the conversion from broad to narrow gauge took a longer time and was more laborious, for the platelayers and navvies, unlike the carriage-builders,

could not call mechanical power to assist them. Right away from Exeter to Falmouth, and on no fewer than seven branches, making in all nearly 300 miles of road, it was a fight of muscle against time; and physical strength, as it generally does, when guided by a strong mind and backed by a dogged will, won. The men, five



FIFTEEN MILES OF SIDINGS AT SWINDON.

thousand in number, necessary to do the great work, were sent west in seven special trains, and dropped practically all along the line from Exeter to Penzance. Many of them, like the navvies in Batty's Wife Town, near Blea Moor, during the making of the Settle and Carlisle line, had to camp out; but their experience was pleasanter than that of the men on the Yorkshire waste, who were sometimes so thoroughly snowed up that they found it difficult to obtain food.

Cornwall and Devon are delightful counties to gipsy in during May; and the men who were ordered out of

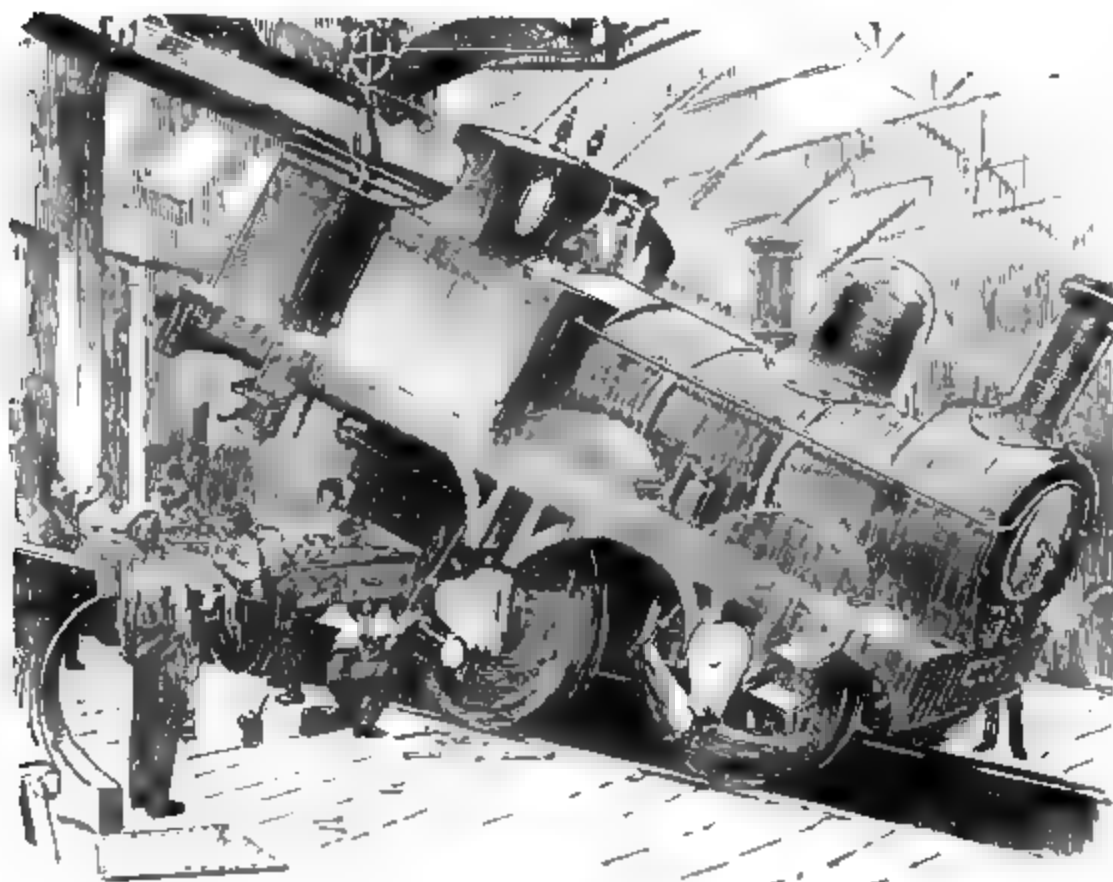
the trains in remote places by the gangers, and were compelled to dwell in tents by the line-side, were envied by other workers who had to sleep in goods-sheds, station-houses, signal-boxes, railway carriages and vans—though perhaps the envy of the men at Lidford was more akin to contentment, for they were housed in the refreshment rooms. Wherever lodged, the men were supplied with bedding—a bag of straw and two rugs for each sleeper; and there was little fear of famine, for each worker had provided himself with a food-supply for five days. The industrial army, which assuaged its thirst with copious draughts of meal-and-water supplied by the railway company, and solaced itself with 10,000 ounces of tobacco—a thoughtful gift from one of the directors—began work at dawn.

The mode of conversion was simple but toilsome. “A gang of ten or a dozen men, each armed with a gigantic crowbar, stationed themselves two feet apart along a length of rail, and with a series of rhythmic lifts and heaves raised the line of longitudinals, with the rails on the top of them, six or eight inches inwards; then moved on another eight or ten yards and repeated the process, and so on till they got to the end of their stretch of line. Then returning, they would in similar manner close up another six or eight inches, till finally, with a third lift, the two rails would arrive at the proper narrow-gauge distance apart.” Gang after gang did this work on the main line and on the permanent way that stretched northward to Moreton Hampstead, and southward to Kingswear, on the road to

Tavistock and Launceston, on the lofty bridge of Saltash, amid the lines and crossings at Mill Bay, and in fact all along the track from Newton Abbot to Falmouth.

Here there were men cutting the transoms, or shortening the rails, or putting down cut lengths at the curves, or fastening the tie rods, or driving the bolts home. Earnest, dogged work went on all through the day, and at night the gauge had been narrowed and the sleepers fixed and fastened. On Sunday the chief duty was to pack the ballast, see that all was right at the points, and test the gauge; and from noon to night heavy engines moved to and fro on different sections of the line, crunching the rails into true position. The next morning a telegram was sent down the line from the company's offices at Paddington, intimating that the conversion had been satisfactorily carried out, that the broad gauge was dead, and that the traffic had been resumed. The work was thorough and smart; and it will be often quoted as an instance of what may be accomplished without intoxicants. The harvest-man, the navvy working on railway or on canal, and the ironworker toiling in front of furnace, have, in tradition and custom, held that beer is the most sustaining beverage. The five thousand men who completed the narrow gauge on the Great Western were teetotalers during their toil. They worked two successive days of seventeen hours each, with short meal times. The industrial strain was great, and like Brother Pelican in the opera, the men were always thirsty; but they were

not plied with beer. The railway company, as we have said, supplied the workers with oatmeal-and-water sweetened with sugar; and the men broke away from their labour and emptied huge flagons of it, and



PUTTING NARROW-GAUGE WHEELS ON A CONVERTED ENGINE (p. 421).

liked it, paying the cool, strengthening drink many a rough but thankful tribute for its thirst-quenching power.

The conversion was accompanied by much incident that is likely to become historic. Crowds gathered wherever permitted on the line, watching the narrowing of the gauge, or the doubling of the lines, or the work on the old timber viaducts. Photographers with demon cameras, not content with taking flying pictures

of the broad-gauge engine "Great Western" on its last journey down, photographed the platelayers and packers at work, portions of the overhauled broad-gauge, and sections of the relaid track. They even photographed the white-tented camps in which the men enjoyed their rest and leisure when their task was done. Many persons, eager to obtain some memento of the broad gauge, placed coins, both silver and copper, on the rails when the last broad-gauge train went down, and secured them again with pride, though flattened, pancake like, out of all semblance of money, the "Queen's head" and the figure of Britannia being ruthlessly crushed by the locomotive's tread. Others, more enthusiastic still, preserved chips and heavier pieces of wood cut or sawn off the transoms, and even appropriated bits of rail ends; while the sincere regret in the mind of one person who had apparently travelled with comfort and safety on the track Brunel thought perfect, wrote on one of the rails: "Good bye, poor old broad-gauge; God bless you!"

The conversion, including outlay on the line, on the sidings and stations and the rolling-stock, cost over a million of money; but it saved a vast amount of time, and led to a more profitable development of traffic with London and the north; indeed, the gauge had not been changed many days before a through express was put on between Torquay and Liverpool, and shrewd attempts were made to induce the industrial crowds of Lancashire to go down and see the beauties of Devon and Cornwall.

The disused broad-gauge rail on all sections of the line was removed during the year; but before the work was completed Mr. Saunders, the then chairman, took an official but regretful farewell of the broad gauge, remarking that "he had been associated with the broad gauge from the commencement of his railway life. They knew that it originated in the brain of that great man Brunel; but if their friend Brunel were living now he was sure he would be the first to approve of the alteration. It was no reflection upon Brunel's genius that they had been compelled to carry out the conversion. His feeling was very strong that the change had been brought about by no want of merit of the gauge itself. It had been crowded out by the aggressive activity of the narrow gauge, which succeeded so rapidly that they could no longer continue the broad gauge alone, or even a mixed gauge, with advantage to the company."

Now the company have overcome the broad gauge difficulty, they have promised to improve some of their stations. A railway passenger at Shirehampton Station, on August Bank Holiday, has given a humorous description of the accommodation there. 'The platform was occupied by many excursionists, and he saw ladies sitting on oil barrels for rest, and a man giving to his children water which had apparently been standing a length of time in the fire buckets. But the stations at Bath and Cheltenham were, at a half-yearly meeting, held up to greater scorn. "Bath Station is a disgrace to the system, sir," said one

shareholder; "Cheltenham is a dirty hole, too," cried another amid great laughter, which was heartily renewed upon the grave assertion that Bath Station had not been thoroughly painted since Brunel's time. A



BATH STATION IN 1845.

promise to spend quarter of a million on the improvement of Bath Station, on a new station for Cheltenham, and also on a new station for Reading, pacified the shareholders.

The tendency of the time is towards all things cheap, towards flimsy property, shoddy clothing, and small-priced goods of all kinds—sold, if one is to believe glaring advertisement, at "an enormous sacrifice." But the greed of gain has not, so far, made the English

producer of railway material heartless. Whatever quotation the maker accepts, he delivers his rails sound. The rails, after being run through the mill, are carefully examined before their transit inland or to the port for shipment; and the contractor may, without misgiving, place them on the sleepers, confident that if properly adjusted and secured they will bear the train, however heavily laden.

Our work in iron and steel will, however, occasionally give way. The heavy and constant wear and tear, and the frequent changes in English weather, cannot but affect the best material and craftsmanship. Many engine-drivers, it is true, appear to be dubious about this argument. They are apt to think that an old locomotive, for instance, is better than a new one. The engine-driver has quite as much affection for his old locomotive as Charles Lamb had for old china; and the worn footplate, grimy with coal-dust and seared with heat, is perhaps as crowded with associations, with memories of old journeys, and old friends—"whom distance cannot diminish"—as the shining faces of the china jars that the essayist delighted to look at to recall the past. Certainly the modern-built locomotive wears well; but the railway engine, like the human engine called man, has to lay up sometimes, and occasionally breaks down altogether. The axle will fracture, the tyre fly into fragments, and the locomotive, plunging helplessly down the embankment, makes havoc and death in the train, and perhaps permanently disables itself. It is seldom, however, that the rails

break. Trains leave them in a most erratic fashion ; displace them as the carriages plough over the sleepers ; twist them and wrench them out of position in collision ; but the English rail, like the English character, is, in the main, still strong and sturdy.



SOUTHAMPTON.

CHAPTER XX.

THE LONDON AND SOUTH-WESTERN.

A Contrivance to Prevent Sea-Sickness—The English Climate—How the London and South-Western Railway has Extended—Pushing into the City—Increasing Traffic—A Curious Bazaar—Waterloo Station and the Gigantic Signal Box—Coming up the Solent—Southampton Docks—American Maile and English Liners—"Hail Columbia" and "The Star-Spangled Banner"—Competition—Results of the Company's Maritime Policy.

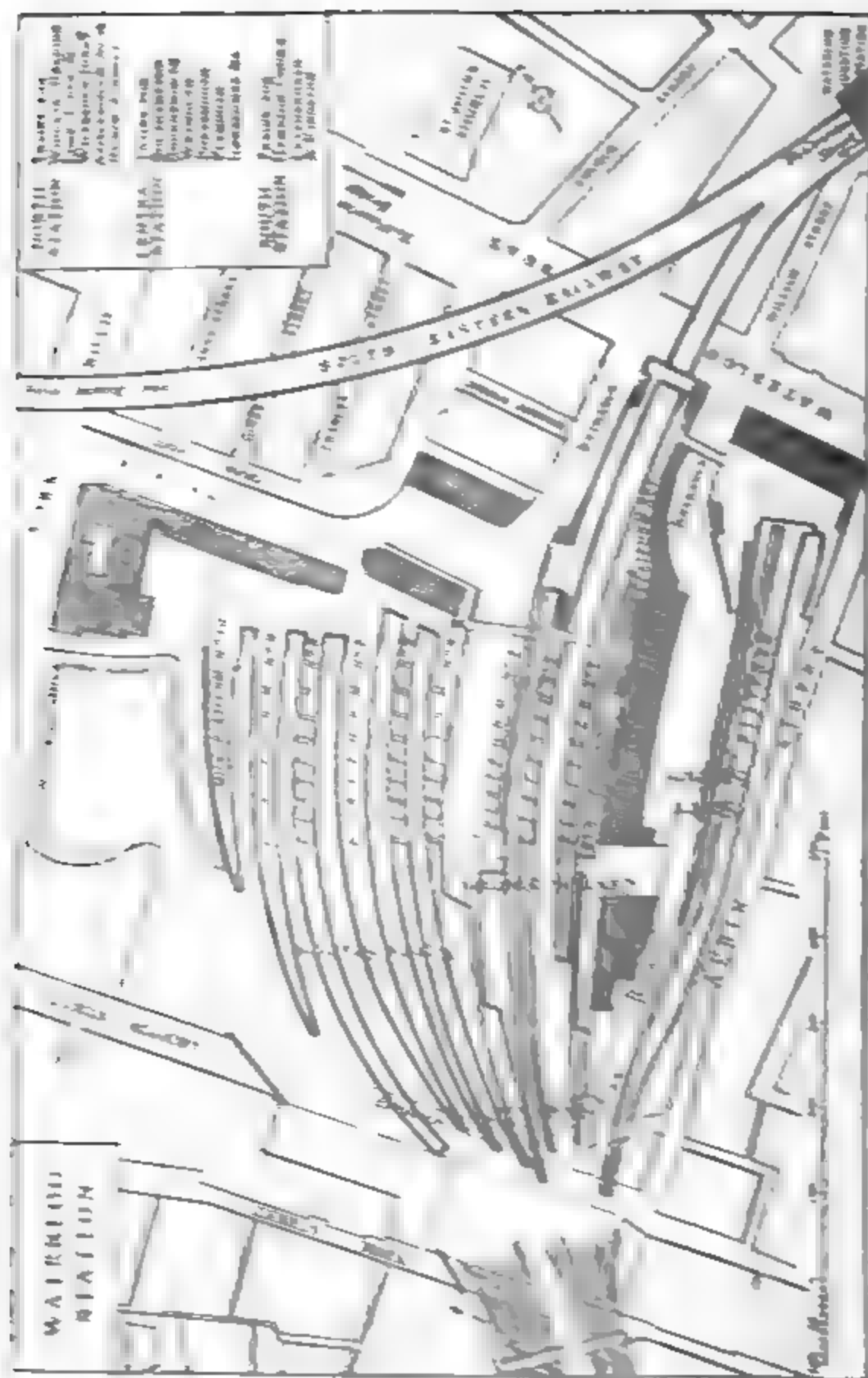
A RAILWAY company, like a newspaper editor and a prime minister, lives and thrives in an atmosphere of criticism. But a railway company is sometimes embarrassed by suggestion. There is not a boy who has arrived at the graceful dignity of an Eton suit, a pert lawyer's clerk, a labour candidate, a police constable, or a prelate, that could not manage a railway easily. It is a thing anybody can do, after the age of fourteen, without training, and without becoming exhausted

and haggard with responsibility. The opportunity, fortunately for the safety of the public, does not often arise. It is true Fate plays strange pranks, converting a Cambridge tutor into a day labourer, or a dissenting minister into a coal merchant, or a duke into a milk seller. But it hesitates to make even a bishop the manager of a railway company. Genius, nevertheless, will assert itself. You cannot tie its tongue, or stop its prating, as in the last century, with ducking-stool and mill-pond. It will not be gagged or fettered, and is particularly prodigal in its suggestions as to railway management. Its advice on train service, on compartments for ladies and smokers, on speed and punctuality, on fares and holiday tickets, and the thousand curious points and questions that spring from railway travel, is bewildering, especially if it comes out of a persistent shareholder's mouth, and the directors, because of his large holding or the mass of opinion at his back, feel it politic not to turn a deaf ear.

It has, however, been reserved to a shareholder on the London and South-Western Railway to make the most novel suggestion lately offered to any railway manager. Brandy was considered in the early days of railway travelling the best cure for the nausea caused by the smoke and vitiated air of ill-ventilated tunnels; and passengers, though the conditions of travelling have much improved since the time of roofless carriages, may occasionally be seen still clinging to the same faith—and to a similar bottle. But they

are somewhat in doubt as to the best cure for sea-sickness; and the London and South-Western shareholder, desirous of developing the steamboat traffic with the Channel Islands, and vividly remembering the day perhaps when, with one eye on the mast-head and the other on the slanting deck, he lurched towards the bulwark or was flung against the man at the wheel, has inquired whether it is not possible to overcome the motion of a vessel by some mechanical contrivance, and so prevent sea-sickness. It is an age of great possibilities, and there is no telling what wonders may be worked on the big ships of the future; but Mr. Portal thought it discreet in his character as railway chairman to give others an opportunity of making fortune and fame by discovering a cure for sea-sickness, and said he should certainly not pretend to compete with his questioner in his search for a remedy.

Mr. Ralph Dutton, for many years the chairman of the company, died on October 8, 1892. He did much towards the development of the system, and took a shrewd business part in the negotiations for the acquisition of the Southampton Docks. He was amiable and kindly in disposition, but had a grievance against the weather, and must have longed, as Mr. Price did on the Midland when the severe storms retarded the work on the Settle and Carlisle line, that railway directors had power to control the English climate, for he said at the August meeting in 1891 that the South-Western receipts on passenger traffic



PLAN OF WATERWORKS.

had decreased nearly £9,000, owing chiefly to the state of the weather during the preceding winter. In one month there were nineteen days of fog, and in March the most severe snowstorm spread over the West of England that was ever known. Trains were snowed up for days, and passengers were rescued with the greatest possible difficulty. The line to Ilfracombe



WATERLOO STATION IN 1848.

was practically stopped for several days, and that, of course, caused a very great falling-off in the receipts. Generally a severe winter was followed by an early and genial spring, but in the past half-year that was not the case, for cold weather prevailed up to the very close of the half-year on June 30, and even then a fire was very comfortable. Easter and Whitsuntide were most inclement, and he reckoned that during those times the railway lost no less a sum than £30,000.

Mr. Portal, who succeeded Mr. Dutton, paid a graceful tribute to the late chairman at the company's

meeting early in 1893, saying that he had ruled with gentle firmness. At this meeting it was announced that the passenger and goods traffic had shown steady development, and that the receipts from the coaching traffic for the half-year amounted to £1,262,000, an increase of £15,000 over the receipts in the corresponding half of the previous year. The London and South-Western Company, since they were incorporated, in 1834, as the London and Southampton, a title they retained till 1839, have greatly developed their undertaking, not only in the city, but in Surrey, Hampshire, and Dorset, and particularly at Portsmouth and Southampton. Their traffic is not confined, as some ill-natured people prophesied it would be, to "parsons and prawns." They have lived down the opposition to Sunday travelling to which the Winchester clergy gave eloquent utterance: they have extended their locomotive-shops at Nine Elms, removed their carriage-building plant to Bishopstoke, and hope in a few years to possess works at the latter place that rival those at Crewe.

In March, 1888, the company shortened the journey from London to Bournemouth thirty minutes by opening a new direct line. In May, 1893, by the opening of the new loop-line from Poole to Hamworthy they diminished the distance from town to Exmouth by forty minutes. The Mayor of Weymouth was one of the first passengers to travel along the short curve across Holes Bay, in company with Mr. Portal, who

expressed a hope that Weymouth, with its beautiful bay, "comparable even to the Bay of Naples," being brought by means of the new line nearer to London, might be used by city men in the summer months as a residential watering-place.

For many years, to use Mr. Portal's words, the company have been twitted with landing their passengers at Waterloo, and it has been repeatedly urged that they should extend their line to the City. Many schemes have been submitted to them; but they reluctantly decided that they could not spend four millions of money. With the progress of science, however, they found they could make a line for half a million, a line that would be a great help to the company with their residential traffic. This is an underground electric railway from Waterloo to the City. It is now in course of construction, and is to run a mile and a half in length from Waterloo, beneath the Thames near Blackfriars Bridge, to a station in Threadneedle Street.*

The company have over eight hundred miles of line. They carry forty millions of passengers over the track, and they carry them carefully; in fact, it is becoming the chairman's periodic boast that through good management and good fortune they are able to convey

* At the August meeting of the shareholders in 1893 Mr. Portal said that as far back as 1846 the importance of getting into the City was recognised by the proprietors, and he believed that what was considered advantageous in 1846 had now, in the year 1893, become almost a necessity. The company which was to construct the proposed railway was independent, but the Act contained powers authorising the South-Western Company to work the line when it was finished.

their many customers safely, comfortably, expeditiously, and, in spite of the dense fogs that sometimes shroud the line, without accident. Some idea of



SIR CHARLES SCOTTER.

(From a Photograph by Fradelle and Young,
Regent Street, W.)

their merchandise traffic may be obtained from the fact that they carry nearly four millions of tons per year, and that during the great agitation they had two millions of rates to revise. They now have a capital of thirty-six millions, and the satisfaction of seeing their stock quoted on 'Change at a higher figure than the London and North-Western.

They are not only careful of their passengers, but considerate of their servants, and have taken steps by which a substantial superannuation allowance is secured to practically the whole of their workers. In this connection it is worth recording that Mr. Portal recently opened a bazaar, at Charing Cross, in aid of the Railway Temperance Union. Whatever one's views may be on the folly or wisdom of teetotalism, this bazaar was unique in its way. The stalls bore the names of Brindley, Brunel, Trevithick,

Gooch, and Thomas Cook. There were pictures indicative of railway travelling half a century ago; the North-Eastern Railway Company sent a model of George Stephenson's "No. 1 Locomotive," with its curiously-holed wheels and sumped funnel, and framework over the boiler that reminded the spectator more of a weaving machine than of a steam engine; and there was also on view the model of the railway carriage in which Müller murdered Mr. Briggs.

The London and South-Western Company, though they may have in Waterloo Station "a mighty maze without a plan," possess in the A signal-box there the largest and most complete signal-cabin in the world. The box has 236 levers, with no fewer than 18,000 distinct lever-motions, and can deal with 45 trains per hour.

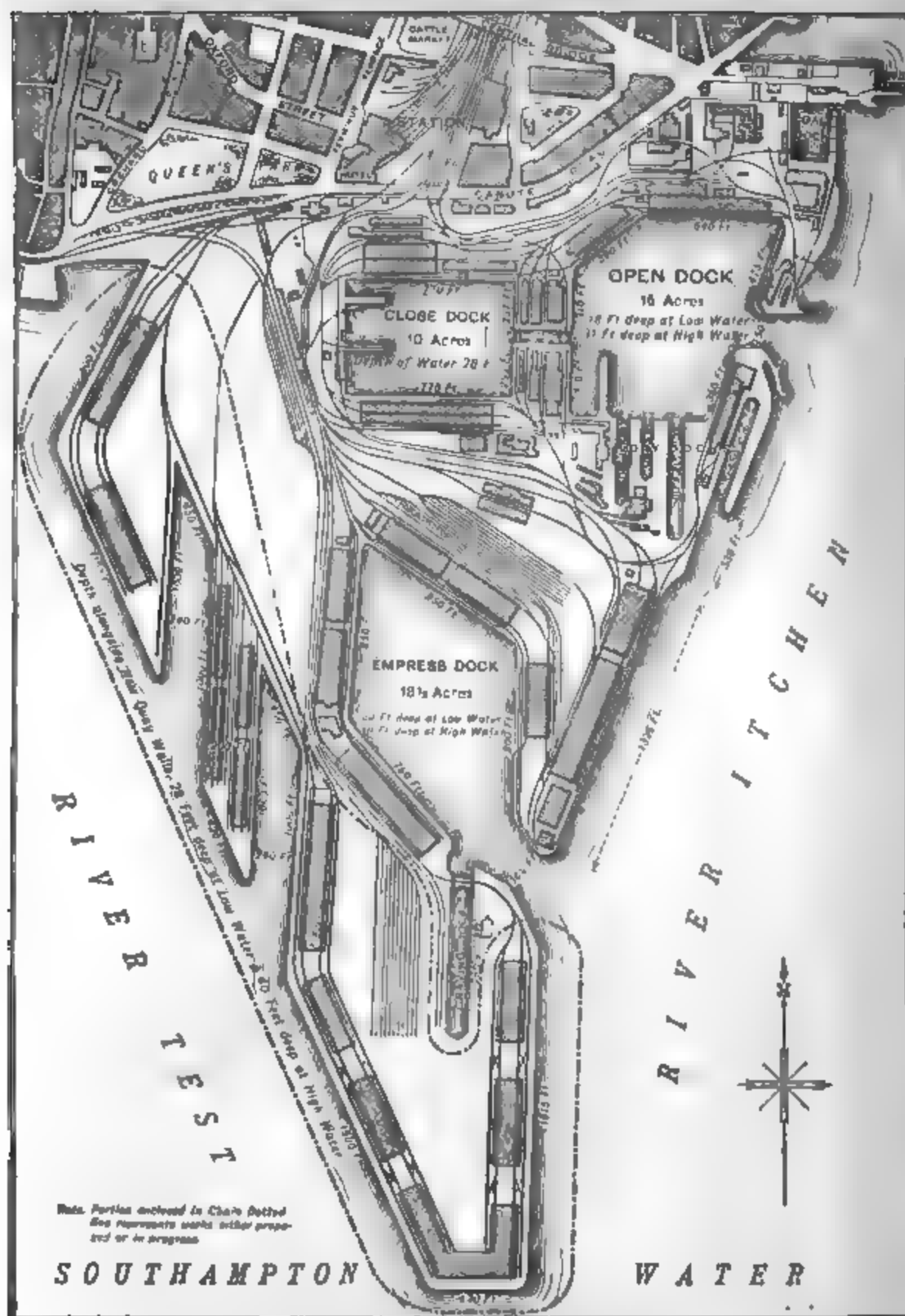
Coming up the Solent, brilliant with sunlight and flecked with the sails of a hundred yachts, one feels Southampton Water to be rather a pleasure resort than a place of trading. Getting nearer the wide creek—that leads inland to the old-fashioned docks and the time-worn port—you pass an emigrant ship, outward bound, its deck packed with Germans and Russians; or a full-rigged ship, heavy with cargo, coming down in tow, on her way abroad; or a Liverpool boat, with passengers and goods, for London. Notwithstanding that Southampton is a calling-place for the ships of the North German Lloyd and the vessels of the Hamburg-American Company, and is also an important port for lines trading to the Cape, its commercial and shipping activity seems, at all events to a stranger,

only fitful; and there is an absence of the intense earnestness that one finds in town, in Manchester, Liverpool, and Glasgow.

But the London and South-Western Railway Company have entered upon the task of revivifying Southampton. They have a strong hope that they will be able to convert the port into a southern Liverpool, and obtain a considerable share of the Atlantic traffic. Having purchased the existing docks for £1,360,000, they acquired fifty acres of mud-land south of the Empress Dock for a new graving dock and quay wall capable of berthing two of the largest steamships afloat, and the Harbour Board encouraged the railway company's enterprise by deepening the channel, so that there might be no grounding.

The company, in their new maritime venture, have obtained what may, in the language of the commercial traveller, be styled "a good line." The old Inman Line, established with Lancashire capital, and having many interesting traditions of fight for the Atlantic traffic, has changed its name and no longer flies the English flag. The International Navigation Company, chiefly consisting of Philadelphia capitalists, now own the steamers. The boats fly the stars and stripes at the masthead, are known as the American Line, and run, not between Liverpool and New York, but between New York and Southampton, carrying passengers and the American transatlantic mails.

Under the Postal Subsidy Act of Congress, the tender of this American shipping company for the



conveyance of letters was accepted in 1892, and the *City of New York* and the *City of Paris* passed from the British to the United States register. On September 12 Mr. (now Sir Charles) Scotter, general manager of the London and South-Western Company,* telegraphed to the Mayor of Southampton: "I have to inform you, with great pleasure, that the American Government have accepted the proposal made to run steamers to Southampton, and in all probability the first steamer will reach that port in March. The American Government rely on the help of all public bodies to make the line a success from Southampton. Hearty congratulations to the town on the result." The Mayor warmly reciprocated the congratulations, and the inhabitants were filled with pride at the thought that the *City of Paris* and the *City of New York* would come alongside their old landing.

It is held by believers in Southampton that that port, though saving little in sea-going distance, is more convenient for American travellers than Liverpool, inasmuch as the railway journey from the Mersey to town occupies more than four hours, whereas the run from the southern docks does not take two hours. The difficulties of embarkation have also been reduced to a minimum at Southampton. The liner practically comes to the

* Sir Charles Scotter, who was formerly goods manager on the Manchester, Sheffield, and Lincolnshire Railway, has been general manager of the South-Western for many years. He is considerate to his staff, a man of great business energy, and has done much sterling work, not only in the development of the system, but in utilising and improving the port of Southampton, particularly for liner traffic from New York.

railway side. The luggage is swung from steamer to train, and the traveller, unless he has a desire to saunter



ARRIVAL OF THE FIRST AMERICAN LINER (THE NEW YORK) IN
SOUTHAMPTON WATER.

through the long quaint street and under the Bar, can step from the deck to the luxuriously-appointed "American Eagle" train, with its saloons of walnutwood and Hungarian ash, upholstered in moquette, and built on the new corridor principle, with side doors to prevent crowding in exit. The company are confident of the success of their project, and look forward to the development of a large shipping trade between New York and Southampton, and also between the latter port and Bordeaux and other Continental quays; they think they are within measurable distance of the day when Southampton will be the great port of interchange between the United States and the Continent of Europe.

The *City of Chester* was the first steamer to bid farewell to Liverpool. She left the Mersey on February 15, 1893, carrying the British flag for the last time, and was followed at the stated sailings by the other vessels of the Inman Line. The last boat to quit the river was the *City of Berlin*, and she steamed away on March 1. On their arrival in New York the vessels hoisted the Stars and Stripes amid much gun-firing and cheering; but the most notable evidence of change of ownership was given at Southampton on March 4, when the *City of New York*, or rather the *New York*—for the boats have dropped "The City of" part of their names—came up the Solent flaunting the American flag instead of the Union Jack. It was night when she reached Southampton Water; but she was safely tugged along the winding water-way, a floating palace,



ablaze with light, proudly escorted by the little steamer *Wolf* all ribbons and furbelows, and swept with stately progress, amid the strains of "Hail Columbia" and "The Star-Spangled Banner," the sound of cannon, the ringing of bells, and the cheering of people, to her new berth in the Empress Dock, having made the passage in six days twenty-one hours and thirty-eight minutes, her average speed being a little over nineteen knots.

The liner's arrival at Southampton was celebrated with much festivity; but notwithstanding the playing of "Hail Columbia" and "The Star-Spangled Banner," there was a touch of pathos and melancholy in the fact that the boats of the Inman Line, after steaming in and out of Liverpool for nearly half a century, had forsaken the Mersey for another port, and had not only changed their name but their flag. The proceeding looked odd even to the adamant heart of Parliament; and though there was no Act on the Statute-book to prevent the sale to a foreign government of any mercantile cruiser, it seemed to some legislators rather strange that the *City of New York* and the *City of Paris*, which had been subsidised as cruisers by her Majesty's Government at a cost of £27,000, should be bartered to a foreign Power.

The London and South-Western, acting on the principle that "there is no sentiment in business," have, however, created a "health-giving competition," of which the passenger is already reaping the benefit. Nevertheless, the South-Western directors have got

a strong grip on their new traffic. They do not mean to let it drift; and some of the shareholders think Mr. Portal indulged in shrewd prophecy rather than romance when he said that in four or five years there would probably be a daily service between England and America through Southampton.*

* The purchase of the Southampton Docks quickly proved a profitable one. The net earnings from the docks in the first six months of acquisition paid the full interest on the purchase money; and the trans-Atlantic connection has undoubtedly attracted much additional traffic to the line.

CHAPTER XXI.

THE SOUTH-EASTERN—THE LONDON, CHATHAM AND DOVER.

The South-Eastern—Fertile Kent—A Train of Hop-Pickers—Heads Out of Carriage Windows—Dear Land—Curious Effect of a Railway Journey—Quick Running to the Coast—The Club Train—Crossing the Channel—The Indian Mail—Dover and the New Harbour—The Channel Tunnel—A Long Ride—Great Bridges—At Sea at Night—Digging for Coal—The London and Chatham—Modern Development of Traffic—Early Embarrassments—Trade Prosperity Twenty Years Ago—Lordly Miners—A Bold Policy—The Prospects of Amalgamation—What May Happen After All.

THE South-Eastern and the London, Chatham and Dover Railways remind one of the first hint given to the student of perspective, that two parallel lines are certain to meet at the vanishing point. They have not yet quite merged in the distance; but they are always coquetting with each other, and ever affording food for gossip as separate systems, before they finally plight their troth. The South-Eastern has grown from a mere stripling to a robust figure whose limbs stretch for 400 miles over one of the most fertile corners of England. It has a capital of twenty-four millions, and a train mileage of over seven and a quarter millions.

The railway, presuming you shy at the river-trip down the Thames, gives you access to the heterogeneous holiday-life of Margate, to Ramsgate, and to Broadstairs, beloved of Charles Dickens, who tells us in his letters how he wrote, and bathed, and strode along the

shore, or varied the pastime of lying on his back on the sand with a flying visit to town, when "there was a sound in Lincoln's Inn Fields at night, as of men laughing, together with a clinking of knives and forks and wine-glasses." It will take you all through the glades and gardens of Kent, and to the quaint Cinque Ports; but its satisfaction will be much greater if it can send you abroad.

The South-Eastern Railway Company act on the policy of "never refusing traffic," and though preferring the dainty first-class passenger by the Royal Mail and special express services, are ready enough to carry the hop-picker, and in 1892 conveyed as many as 27,000 of these amateur nomads from the city to the Kentish fields, where they dwelt in sheds and tents, in some cases under far worse conditions than those endured in the seventeenth century by the English gentry, who crowded into wooden sheds at Buxton, and "were regaled with oat cake, and with a viand which the hosts called roast mutton, but which the guests strongly suspected to be dog."

There are two interesting facts that contrast the South-Eastern of the past and of the present. Early in 1893 a passenger by the up boat-train was leaning his head against the carriage-window when he was struck on the temple by the corner of the brick-faced pier at the mouth of the Shakespeare Tunnel and seriously injured. The pier divides the up and down tunnels, and the corner against which the passenger's head struck was not quite eighteen inches from the side of

the carriage. The incident disclosed the fact that two underground ways constructed half a century ago have become too narrow for the clearance of the more ample railway carriages now in use, especially by travellers of a curious turn of mind and head; and Major-General Hutchinson recommends that the practice adopted



CHARING CROSS STATION.

(From a Photograph by G. W. Wilson & Co., Aberdeen.)

fifteen years ago, of posting notices cautioning passengers against putting their heads out of carriage-windows, particularly when passing through tunnels, should be reverted to. The other fact throws a strong light on the value of land now required by railways. Half a century ago the price of land at Bermondsey was not ruinous. Now you need the banking account of an American millionaire to buy it. In 1892 Sir Edward Watkin, replying to a shareholder who urged

the importance of widening the line, remarked that they were anxious to do their best for the shareholders, but railway extension was developing into an extravagant recreation, for at Bermondsey the price put on a small strip of ground the company sought for line-widening was £1,250,000.

Charing Cross is practically the heart of the South-Eastern Railway Company. There is the throb and clatter of the "roaring loom" of life in the thronged street, in the quadrangle in which the great hotel rears its façade, and in the station itself. Charing Cross, with its crowded platforms, its incessant noise of incoming and out-coming vehicles, is not only one of the busiest termini in England, but is in familiar touch with the far East; and you can book almost as easily in it for Paris, Rome, Brindisi, for India and China, as you can for Croydon, Reigate, Guildford, and Reading, or for Tunbridge, Hastings, Gravesend, or Snodland, the paper-making town in the Medway Valley that seems to have appropriated half the name of one of the characters in "Pickwick."

When the South-Eastern was incorporated in 1836 the project was to make the line simply from Reigate to Dover; but three years afterwards, adopting what in those days was deemed a bold and enterprising policy, the company secured the right to run northward to Croydon on payment of toll. Since then they have dominated Kent, and forced their way into Surrey and Sussex, opening new lines and steadily increasing their traffic; but they have not succeeded in pleasing



THE FIRST SOUTH-EASTERN TRAIN TO CANTERBURY (1840).

everybody, and are often taunted with harbouring "the thief of time." It is alleged that some trains are not only unpunctual, but are possessed with a destructive spirit, one passenger complaining that between Cannon Street and Reading the third-class carriage in which he was seated behaved so roughly, with jump and jerk, and was so long getting over thirty miles of track, that he almost "wore out a pair of trousers" on the journey. Notwithstanding the novel experience of the Reading passenger, the third-class compartment on this railway is evidently becoming more popular. Lord Brabourne, who had a business reputation as the vice-chairman of the South-Eastern, a name in literature as the writer of fairy stories, and, towards the end of his life, a chequered political career, presided in January, 1893, at the meeting of the company, and said there was undoubtedly a disposition to travel third-class, and that only a day or two before, he met a well-beneficed clergyman travelling with his family in a third-class compartment.*

Though the company do not hurry their trains along some of the Kentish lines, they make quick running to the South Coast, doing the seventy-five miles from Cannon Street to Dover in ninety-eight minutes. The most captious passenger could not justly quarrel with the speed of the Club train, one of the smartest-looking expresses in England, which quits Charing Cross in the afternoon and speeds down to Dover,

* Lord Brabourne, perhaps better known as Mr. Knatchbull-Hugessen, died on February 6, 1893.

putting the traveller in touch with swift boats and the North of France Railway, so that he is able to bridge the distance between London and Paris in eight hours. The train is for first-class passengers only; but since the autumn of 1892 third-class passengers have been conveyed by the daily mail trains and expresses to Dover and Folkestone for Ostend, Calais, and Boulogne, and they are comparatively little longer on the journey than the passengers by the Club Train.*

The South-Eastern, in conjunction with the North of France and the Paris, Lyons, and Mediterranean Companies, are prepared to take you anywhere. By *train de luxe*, and morning and evening *rapide*, they will enable you to escape the fog, the slush, the damp and chill of the English winter in sunny Riviera or lazy Italy. At the beginning of 1893 the conditions of progress on these southward trains were greatly improved. The ordinary first-class carriages on the morning and evening *rapide* trains were replaced by long *couloir* carriages, with compartments for six passengers. The carriages communicate with each other, and passengers can go from carriage to carriage without leaving the train, whenever they desire, like Professor Blackie in the interval at the bagpipe performance, to "stretch their legs." It would be affectation, however, to suggest that the new "beaked"

* Since the above was written the Club Train has been discontinued. It did not pay, and the working of it resulted in serious loss, particularly to the London, Chatham and Dover Railway Company. Passengers, now that the tendency on all lines is to cheapness of travel, demurred to the payment of higher fares even for greater luxury and increased speed.


engines of the Lyons and Mediterranean Company are as ornamental as the carriages. The front of the engine shown in our illustration is fitted with iron plating at an angle of forty-five degrees, with a view of breaking the force of the wind, and it is said that by this device a saving of ten per cent. in fuel is effected.

The old days when the grand tour was considered part of the education of the sons of the wealthy only have gone by; now everybody travels. The Lancashire operative, who formerly found his chief pastime in clog-dancing, dog-racing, or wrestling, now takes his holiday in Blackpool or on the Irish Coast, or strikes through the country to London. It is possible, now the Manchester, Sheffield and Lincolnshire Railway Company have made access to Belgium by Grimsby so easy and cheap, to find the minder and reeler far away from the mill, sauntering with English aggressiveness about the streets of Antwerp, pleased, in a taciturn way, with a look at another land, and, with his inherent love of music, charmed with the cathedral chimes, which remind him, he cannot tell why, of the softer notes of the "Besses o' th' Barn band," so well known in the County Palatine. But he soon finds that even the Place Verte wants doing up a bit; and, somewhat oppressed with the multitude of churches and pictures, and longing again for the sound of the shuttle, he goes down to the quay two hours before the boat starts down the Schelde for England. The Londoner still goes to Epping Forest; but he also

goes to the South of France, down the Rhine, to Egypt, and beyond. He has become an inveterate globe-trotter. He knows comparatively little of the great city in which he lives and strives; how rich it is in art, in literature, in historic association; but he can probably tell you the time the next train leaves Jerusalem station, and in the guise of the tourist he is tripping up the heels of the explorer.


The stream of human life between England and the Continent is rapidly increasing. The growth of traffic through Dover and Calais alone is instructive, indicating, as it does, that people rush about far more now than they did thirty years ago. In 1865 the total traffic between the two ports was 121,308; in 1888 it had grown to 248,001; in 1889, the Exhibition year, it increased to 346,934; and in 1892, though the fear of cholera kept some people at home, no fewer than 248,347 passengers journeyed between Dover and Calais. The spread of education and the expansion of trade have tended to foster travel; and the improvement in the cross-Channel service has had a good deal to do with the development of traffic.

In the early part of this century the packets were cramped though frolicsome. On the authority of Mrs. Major O'Dowd, in Thackeray's "*Vanity Fair*," the boats, one of which conveyed the estimable and valiant lady as near as it could get to the Battle of Waterloo, were not so fine as canal boats. "Ye should see the kenal boats between Dublin and Ballinasloe," she remarked proudly. "It's there the rapid travelling is ;



and the beautiful cattle." The passengers whose good or evil fortune it was to cross to Calais thirty years back in the little boat *Ondine* no doubt have a vivid recollection of the boisterous sea and the wave-splashed deck—and their intense longing to die. The *Wave* and the *Breeze* were not much better; but these old-style boats have long been superseded by later-built vessels, such as the *Calais-Douvres*, the *Victoria*, and the *Empress*, worked by the London, Chatham and Dover Company to Calais; and the *Mary Beatrice*, the *Albert Victor*, and the *Louis Dagmar*, run by the South-Eastern Company from Folkestone to Boulogne—vessels well equipped, comfortably and even luxuriously appointed, and of considerable speed. In fact, a run across the Channel has become only an hour's ride, to be taken with almost as little scruple as the train-run from London to Brighton or Dover, or the hourly express—only forty-five minutes' run—from Manchester to Liverpool.

There has been a steady development of sea-going traffic at Folkestone since 1843, when the South-Eastern began to run their packets from that harbour to Boulogne; but Dover, sheltering under the cliffs, and interesting alike for its ancient and modern defences, has not latterly stood still. It is on the Royal Mail route for the Continent, India, and the Colonies. And it sends out not only many heavy mail bags, but a crowd of passengers and much merchandise. The old Cinque Port, protected in the sixteenth century by the brass cannon facetiously known as "Queen Elizabeth's Pocket Pistol," and now by the great guns



humorously styled "Woolwich Infants," is stretching its arms seaward, not to singe the beard of the Spanish king, as in the days of the Armada, but to gain commercial strength. The Duke of Wellington strongly urged the construction of a national harbour at Dover, but in vain. The Admiralty Pier, running nearly sixteen hundred feet out to sea, is a fortification, a railway track, and a promenade; but it does not form a harbour of refuge. Now the Harbour Board are at work on a real shelter for ships. To the eastward they are constructing a new pier that juts from the esplanade and curves towards the Admiralty Pier, practically enclosing an area of fifty-six acres, in which the largest ships may ride secure against the fiercest gale.

The new structure, nearest the shore, will be an open viaduct to permit the movement of the water; but beyond it will consist of a pier of solid masonry fifteen hundred feet long, and as strong, probably, in its resistive power as the Admiralty Pier, which took thirty years to build and cost a million of money. Within the harbour the genius of improvement has been busy, and one of its most notable tasks has been the removal, American fashion, of the Clock Tower to another position in order to get a straight path from Wellington Bridge to the new pier. Without the existing tidal harbour a work of far more importance is proceeding. Seven acres are being reclaimed from the sea, and on this new ground a station will be built for use by the London, Chatham and Dover Company and the South-Eastern Company, and by means of two broad jetties,



ARRIVAL OF THE INDIAN MAIL AT FOLKESTONE (1840): EXPRESS OMNIBUS PROCEEDING TO RECEIVE IT.

rail-laid and covered in, a station almost completely surrounded by sea, passengers will be run so near the boats that they may almost step upon the deck from the train.

The new harbour, which has to be finished in 1898, will cost altogether nearly a million of money but "no undue financial burden will be thrown upon the commerce of the port," for Parliament has given the Harbour Board authority to levy a poll-tax of one shilling upon every passenger entering or quitting Dover by sea; and the impost, which has been collected by the railway companies since July, 1892, is yielding a handsome return, that promises to increase with the improved service, especially as on the French side the twenty-six per cent. tax formerly demanded by the Government on every railway fare has been abolished.

It is remarkable that though "Britannia rules the waves" she never thoroughly trusts them, and dislikes them exceedingly when they are choppy. There have been many projects to enable susceptible travellers to avoid rough-and-tumble acquaintance with the Channel waters. At one time there was a proposal to construct a huge ferry-boat to convey trains across the Channel after the fashion of the ferry that worked the train across the Rhine. Then came the vessel *Bessemer*, with its swinging saloon, and the twin-ship *Castalia*; but they failed to overcome the fiend *mal de mer*. Near Folkestone are the works of the Channel Tunnel, the bold subterranean way beneath the sea, abruptly stopped in the making by the order of Parliament. If you have

an idle hour in Folkestone, and care to gossip with the old sailor who looks like the brother of Dick Dead Eye in the Gilbert-Sullivan opera, you may pick up a good deal of fact and fiction about this submarine way to France. One of the most thrilling romances is to the effect that Sir Edward Watkin, when foiled on this side the Channel, silyly winked at his railway partner on the other side secretly to drive the tunnel from the coast of Normandy right across the boundary in mid-channel, and that some day an intrepid little French engineer, having wriggled through the heading, will step proudly on the English shore, clear the chalk-dust out of his throat, and exclaim, "Ze perspire was much, but ze work is splendid. Perfidious Albion is at our feet!"

There is the feeling in many breasts that the French, polite and accomplished though they be, are quite near enough to England, and that the stormy bulwark God has placed around the coast should not be undermined. The probability is, therefore, that the Channel Tunnel will for some time to come be merely a show-place; but

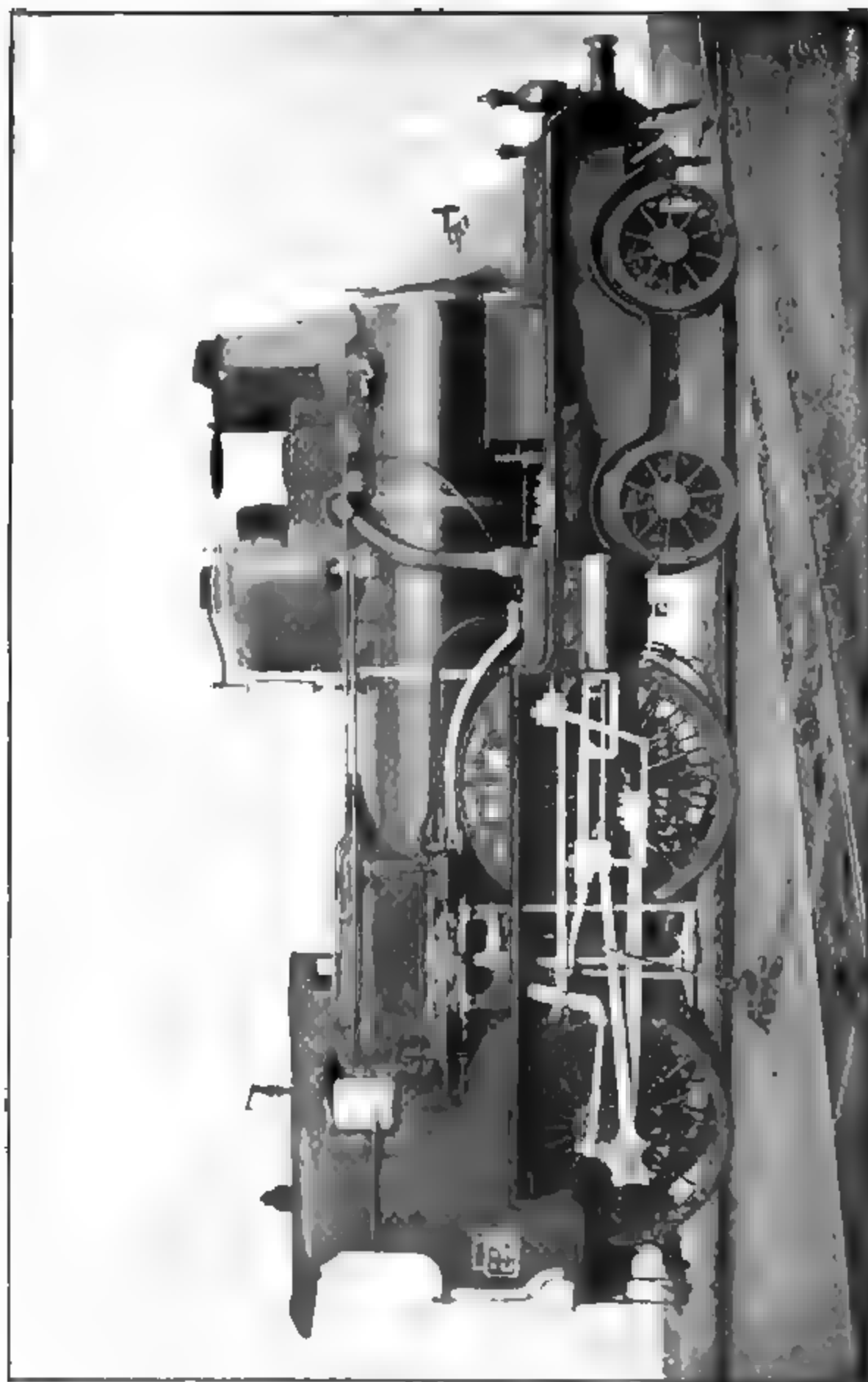


SIR BENJAMIN BAKER.

(From a Photograph by Mayall and Co., Ltd., Piccadilly.)

Sir Edward Watkin, notwithstanding his weary wait for ten years, was still so buoyant with hope that he kept the experimental seven-feet way bored through the grey chalk and clay open and clear, in the expectation that the English people will ultimately get over their "prejudice" and permit the tunnel-making. He looks forward still to the day when Kurrachee will be connected with Europe by rail, and when there will be a clear run, by way of the Channel Tunnel, from Manchester right away to our Indian empire.

Sir Edward Reed, reminding the country that the Channel is "practically impassable to thousands of persons who wish to go abroad but are prone to sea sickness," is intent upon making a tubular railway from England to France; but there is an even bolder project—to build a bridge across the Channel! The idea is not a new one. More than half a century ago a French engineer proposed to bridge the boisterous way. Now a plan has been in all seriousness brought forward for the construction of a bridge, almost on the same principle as the Forth Bridge, to carry a double line of rails across the Channel. The engineers, MM. Schneider and Hersent, in association with Sir John Fowler and Sir Benjamin Baker, proposed that this monster bridge should consist of seventy-three spans, resting on seventy-two piers, reared from the sea bed high enough to give a clear headway of two hundred feet for shipping. One writer, discussing the scheme, naïvely says: "The great difficulty of the project is to secure a foundation for and to rear the superstructure in its place." But this is




"BEAK" ENGINE IN USE ON THE PARIS, LYONS, AND MEDITERRANEAN RAILWAY (p. 452)

not the chief difficulty. With sufficient capital to work upon, modern engineering, vast in idea and daring in execution, could undoubtedly construct the bridge, and it might possibly have a long life amid the storm of the Channel; but it would, however well lighted, be a nuisance and a peril to shipping.

The seaway is becoming more crowded every year. "I'm blessed if I wouldn't rather drive a hansom in the Strand than bring my ship through this ruck," said a captain to the author some time ago in mid-channel, as the boat was making her way towards the mouth of the Thames. It certainly was sharp work. The night was pitch dark; the wind blowing a half-gale; the sea running high, ridged with snow-white breakers, and frolicsome with spray, that continually splashed up on to the bridge. On the foredeck a prowling figure, clad in oilskins, kept up the monotonous shout, "A light ahead, sir!" And there were so many that the sea seemed to be dotted with street lamps, and the two men at the wheel had a hard time of it veering the ship this way and that, at the skipper's quick behest, as craft after craft loomed by.


The South-Eastern are colliery proprietors. They have bored for coal at Dover and found it, and have been told that the seam they have struck is part of the Belgian coalfield. There is some prospect, presuming there are thicker seams of coal in the lower strata, of the company becoming a great coal-getting and coal-carrying concern. Anyhow, Sir Edward Watkin, with his magnificent confidence in every project he has



undertaken, offered £1,000 towards the £40,000 required to make the shaft, and the sinkers are at work.

The South-Eastern are fortunate in the possession of a shrewd general manager. Sir Myles Fenton began his railway career in 1845, and has served the East Lancashire, the Great Eastern, the Sheffield, the South-Western, the Lancashire and Yorkshire, and the Metropolitan Companies. In 1880 he was appointed general manager of the South-Eastern Railway; and by his business tact and unvarying courtesy has not only made a name in the railway world, but gained much social distinction. He is the senior general manager of the English lines, and the first who, during his term of office, received the honour of knighthood.


The London, Chatham and Dover Company do not pose as the possessors of the "shortest and cheapest" route to Paris; but they make the most of their opportunity, asserting that "the shortest sea-passage by twenty minutes is made daily between Dover and Calais by the largest and fastest new vessels." The company, incorporated in 1853, started their career with a line from Strood to Canterbury, originally twenty-nine miles in length, with short branches to Faversham, Quay, and Chilham. Formerly their terminus was at Blackfriars, then they pushed forward to Ludgate Hill, and afterwards to Holborn, completing their viaduct terminus by the erection of a great hotel. A few years ago they spent nearly a million of money on their bridge across the Thames and their station in



Queen Victoria Street (St. Paul's). In 1892 they opened the Catford loop-line, connecting the main line at Shortlands with the Crystal Palace and Greenwich lines at Nunhead, and began working a local service on the main line and St. Paul's that gave twenty-one additional trains between the City and Bromley and Bickley.

At this time too they announced an almost hourly service of express trains from Victoria and Holborn Viaduct to Westgate, Margate, and Ramsgate; and also a change in the cross-Channel service, to the effect that the morning mail would leave Victoria and Holborn and Paris respectively at eight o'clock, and arrive in Paris and London at half-past four o'clock, so that "letters from London and Paris by this morning mail can be delivered and answered the same day," a rapidity of transit that would have considerably surprised King Canute, as he sat with wet feet on the beach, and would have proved useful to the Black Prince, when, in hot zeal, he longed to be on the French battlefield with his archers. Now the morning mail leaves London and Paris at nine, the former reaching its destination at 4.45, and the latter at 4.35.

Railway dividends are, with one or two exceptions, showing a tendency to shrink. A rough-and-ready friend of the author's, who somewhat resembles Perkin Middlewick in manner, and has also made his money in butter, said the other day as he was going down to a railway meeting: "Dang me; ah bought them shares at £126, and they aren't payin' four per cent.



It's worse nor t' Post Office Savings Bank ; an' ah think it 'ud be a lot better to spend t' money as it comes in and save t' bother."

Many a railway shareholder was in a worse position



ON THE TRAMCAR IN THE CHANNEL TUNNEL.

in 1866, when on some lines there were no dividends at all ; only the rather uncertain gleam of hope from the leading journal that " nearly all the embarrassed railway companies will gradually retrieve their affairs by the natural increase of traffic, and by the abandonment, by the provisions of an Act of last session, of burdensome branches and extensions." It was the notable year of the stoppage of the great financial house of Overend and

Gurney. "The greater part of the ordinary stock of the London, Chatham and Dover Railway was advertised for sale at an apparently ruinous discount, and it was known that several railway contractors were unable to obtain a continuance of the advances on which their solvency depended."

Nor had the company disentangled their affairs in the following year, for the *Times* recorded that "the embarrassments of the Brighton, of the North British, of the Great Eastern, of the Great Western, and, above all, of the London, Chatham and Dover, and the doubts which have arisen as to the financial condition of the Caledonian Railway, press heavily on the credit of the most prudent and prosperous companies." In 1870, when the outbreak of the Franco-German war diverted a large amount of trade to England, a singular condition of things arose. The railway traffic returns showed a gratifying increase; yet "the depreciation of stocks and shares was as great as at the commencement of the Crimean war."

Two or three years later, however, the country was in the heyday of prosperity. Everybody was busy. The prices of coal, iron, and steel advanced enormously. The miners especially were able, by trade-union or the urgent demand of customers, to get almost any rate of wages; and some declined to work more than three days a week, and bedecked themselves with fine raiment, particularly affecting sealskin waistcoats, and neckerchiefs gorgeously coloured, and massive jewellery; one coal-getter at a Yorkshire pit wearing such a gigantic

watchguard that his mate remarked : " Nah, lad, wot's thah get on ? Ah shud think thah'll bi stickin' a pick i' thi' buttonhole next, and showin' off i' tap-room wi' a pulley and a yard o' chain aht t' pit across thi chest ! " The railway companies carried more traffic than in any previous year ; but the dividends did not leap so readily as some shareholders expected, a portion of the additional earnings being absorbed by the higher coal prices, the dearness of rails, and the increased pay to the men.

The London, Chatham and Dover Company have, like many other estimable persons and corporations, continued more or less to experience the awkwardness of impecuniosity. They have been bold, almost reckless, in their policy. When they have succeeded in half-filling their pockets they have emptied them again by running into their enemy's territory, instead of trying to develop their own land. " With their eyes open they have gone to Gravesend and to Greenwich, to Sevenoaks, to Maidstone, and to Ashford ; and they have opened a line which practically parallels the Mid-Kent branch of the South-Eastern. Of course the South-Eastern have retaliated. They have built a line across the Hundred of Hoo to Port Victoria, for no reason on earth except because the Chatham and Dover was already at Sheerness. Not long ago they opened a line into the heart of Rochester and Chatham, and thereby deprived their rival company of one of its most lucrative sources of traffic." The shareholders were not much surprised, therefore, to be told in the first half of 1890 that, entirely owing to

the happy accident of the French Exhibition, which yielded receipts to the amount of £32,000, the company were, for the first time in their history, able to pay the full dividend on the preference stock. In 1891 the expenses of working ran the increased revenue a close race; and in February, 1893, Mr. Forbes made the discomfoting announcement that while they had been at considerable outlay in opening the Shortlands and Nunhead line, and in building the new station at Rochester, the growth of their traffic had been absolutely arrested. In fact, there was a decrease of £20,000 in passenger and steamboat traffic alone. Now, however, the prospects of the undertaking are more hopeful. The cholera scare is over, the panic in the fuel market has ended; and the company, with the probability of saving £20,000 a year by the discontinuance of the Club Train arrangement, and of making an extra £10,000 a year by the new contract with the Government for the conveyance of mails between Dover and Calais, may yet cross the threshold of prosperity.

While openly fighting, the two companies have for years been nibbling at the bait of amalgamation. At one time the negotiations were so close that notice was given of a joint Bill; but the companies broke away from one another, and at the August meeting of the London, Chatham and Dover in 1891, Mr. Forbes said that though they had buried the hatchet, fusion with the South-Eastern had quite passed out of the region of practical railway politics, and they were going to play their own hand. Yet the company had nothing

to lose and everything to gain by amalgamation, fusion, or working agreement.

Notwithstanding the declaration of Mr. Forbes there was much talk about amalgamation. Lord Brassey, who described himself as "the son of one of the fathers of our railway system," objected to it. "Unchecked by competition, railway companies," he said, "are under strong temptation to avail themselves to the utmost of the advantages of their monopoly. These tendencies have been exhibited in a marked degree by the South-Eastern. It has been the avowed policy of the Board to charge fares largely in excess of those paid on the railways north of London, where the public have the full benefit of competition. The growth of traffic has been checked, not only by the high fares charged, but by the extreme inconvenience of access to London. The time occupied between New Cross and Charing Cross is rarely less than twenty-five minutes; while the delay caused by running in and out of Cannon Street Station, with the subsequent stoppage at Waterloo, is so serious that it is always best for those having pressing business at the West-end to leave the train at London Bridge and take a cab." On the other hand, Mr. Beckett Faber, the Leeds banker, wrote: "The prosperity of the South-Eastern Company has now been declining for some years, owing, as I hold, to the insane competition between two companies whose systems together are less than 600 miles in length. Under amalgamation there might be one, and only one, thoroughly efficient service to Paris; the traffic (both passenger and goods traffic)

to our south-eastern watering-places might be cheaply and punctually handled, and the access to our incomparable Charing Cross Station might be made easier."

At the meeting of the South-Eastern shareholders in January, 1893, the late Lord Brabourne made a statement on the subject. For some months Mr. Nathaniel Spens, like Ariel in "The Tempest," had directed the storm against the Board. Backed by one-third of the leading directors, he called an "independent" meeting at Winchester House in October, 1892, contrasted the progress of the Great Eastern, the Great Western, and the London and Brighton with the decline of the South-Eastern and Chatham, and said that the two latter companies had failed to share in the general prosperity because of their own absurd and reckless opposition. He urged the importance of amalgamation, saying there would be a large saving in revenue, a more effective service, and a less bitter competition for the Continental traffic.

Reflections, amid considerable uproar, were made on the value of the Chatham shares, and also on the motives of Mr. Spens. Mr. Doyle, who laboured under the disadvantage of almost continual interruption, was anxious to know whether Mr. Spens had a large holding of Chatham stock, and significantly remarked that it was impossible to "serve God and Mammon." To many people this Biblical quotation is familiar enough; but it is evidently a novelty at a railway meeting, and it attracted great attention and aroused much indignation. When Mr. Spens, accurately

gauging the sympathy of the shareholders, asserted that Mr. Doyle was not qualified to attend the meeting, the indignation surged into a roar of disapprobation against the intruder, and there were cries of "Turn him out!" and "He's a wolf in sheep's clothing!" The meeting throughout was stormy; but out of it sprang a resolution sanctioning the appointment of a committee in favour of amalgamation to confer with the directors.

Lord Brabourne ventured to think that this committee had made a great mistake with regard to their own policy and the action of the South-Eastern. A year before the relations between the two companies had, he explained, become amicable, and litigation ceased. They had, indeed, met in council, and considered the four heads under which such great expense was incurred—the enormous number of advertisements issued, the great duplication of trains, the giving of passes to attract traffic, and the maintenance of the steamships, all expenses in connection with the latter being borne by the English companies alone. The directors of the South-Eastern were, however, averse to amalgamation, for they could never amalgamate capital with the Chatham Company without running the risk of an enormous loss. They were prepared to help the Chatham Company in every way they legitimately could consistently with the interests of the South-Eastern Company, and, if possible, to have the two lines managed as a joint concern, earning as much as they could for the joint purse; but they must divide the proceeds according to agreed proportions

Mr. Spens made a final struggle for amalgamation, but he did not bring forward any proposition. A resolution of confidence in the directors, of regret at the attempts of Mr. Spens to divide the proprietary, and in favour of a friendly arrangement with the Chatham Company with regard to the traffic which would not involve the expense of an application to Parliament, was adopted. In further support of the directors a poll was taken, and the vote in favour of the resolution was, in person and by proxy, 56,708, and the stock represented nearly £5,500,000. Mr. Spens even had calmed down; for the voting against the resolution, present or by proxy, was *nil*.

A political opponent once styled Sir Edward Watkin "that Railway Machiavelli," believing him, no doubt, capable of what Lord Macaulay calls the most "dexterous perfidy." It looks, however, as if the venerable but active baronet, in his desire to wipe out the national debt and give the poor man "a free breakfast table," has the promptings of a patriot. Whatever his motives, Sir Edward Watkin is not easily turned from his purpose; and though he has now retired from the chairmanship of the South-Eastern, as well as of the Metropolitan and Sheffield Companies, he has not lost his interest in railway affairs, and possibly in the seclusion of his study at Northendon he pensively meditates upon a plan of his great cross-shaped railway, striking from east to west, from coast to coast, through Yorkshire and Lancashire by the Manchester, Sheffield and Lincolnshire Railway, and stretching from

Barnsley to Sheffield, and from Sheffield to London by the new line of the same company. There may be a little break here in the broad red line on his railway map; but though, as Lord Brabourne once said half-seriously, Sir Edward had, with regard to the Sheffield clauses, to submit to an autocratic board, it is possible that if he were a few years younger the gap would not always be there.

CHAPTER XXII.

THE LONDON, BRIGHTON AND SOUTH COAST.

London and Brighton—On King's Road—By Rail to Town—By Coach to the Sea—"Jockey of Norfolk's" Topsy Drive—A Throng of Passengers—English Work in Iron—The House Fires of the North—A Cold Day at Brighton—The Exasperated Waiter—The Fight to Make the Railway—"A Forensic Lion"—A Tilt at George Stephenson—"The Derby"—Middle-Class Thrift—London and Paris—Some Things that Come from France—Drivers and Travellers—Railway Punctuality—Criticism of Train Speed—"What is Wanted is 'The Man'"—Doing Pretty Well.


No passenger gives much thought to rows of grim railway statistics as he makes his way to London Bridge, Victoria, or Kensington, intending to go to Brighton for health or pleasure. He dreams rather of the sunlight flashing on the brown beach and of the breeze that rollicks in shore, coquetting as it comes with the dark sails of the fishing-lugger that has been out all night in quest of somebody's breakfast; or he thinks of the fashionable crowd by the sea, the crowd ever moving on promenade and drive, on foot or on horseback on King's Road, and often including both men and women distinguished in English life.

Brighton is, in a very real sense, the playground of London; and not only the society beauty, but the jaded statesman, the tired painter, and the hard-worked author have reason to be grateful to the railway for

such an easy road to it, though they are apt to wonder sometimes why the locomotives do not get more quickly over the track.

In some circumstances the locomotive's speed cannot outrun a passenger's impatience ; still the pace of the express, after the train had cleared the crowded lines and the flying junctions between town and Croydon, was satisfactory to the late Mr. Parnell, as he sped away from political turmoil and dilemma in London to the quietude of the Hove. Nor can any business man, called to counting-house or to grapple with bulls and bears on 'Change, complain of the speed of the morning train that takes him back to London's whirl.

The journey, though perhaps more romantic, took a longer time in the days of the last of the Georges. The locomotive had not then made the country-side echo. There was the crack of whip, the ring of horse-hoof, the roll and sway of coach along the dusty road. The prince, grown to be a man, had invented a new shoe-buckle ; and probably seeking relaxation from the exhausting work of an inventor, "joined, as was the custom of the day, in drinking and singing after dinner," now and then lazily watching "the butler tired of drawing corks." It was, according to Thackeray, at the Pavilion at Brighton that the old Duke of Norfolk, familiarly styled "Jockey of Norfolk," drove from Arundel Castle, with his noted grey horses and roomy equipage, to be made drunk by the prince, and to be trotted for half-an-hour round



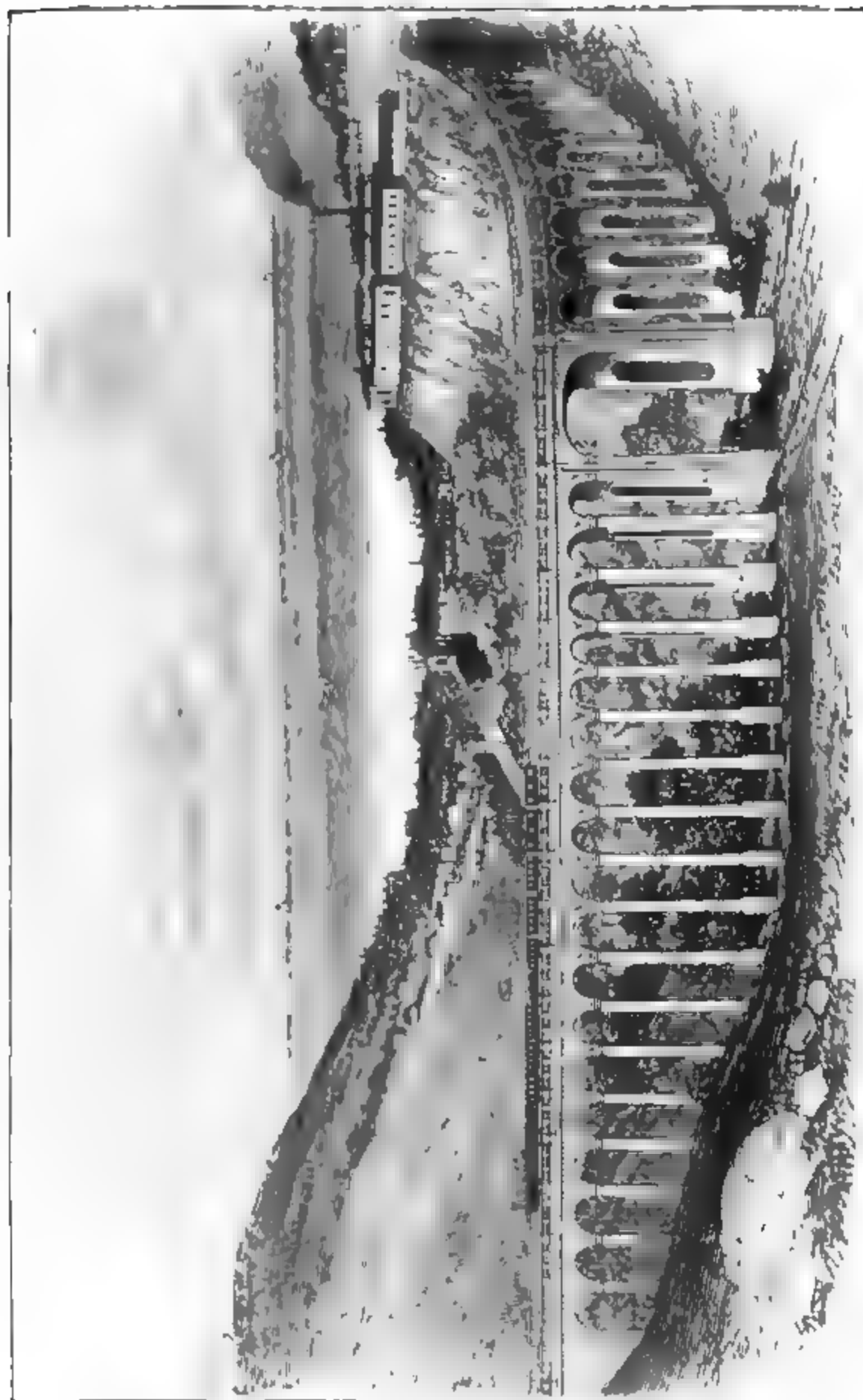
the Pavilion lawn under the maudlin impression that he was going home again. The prince on this night of revelry was no doubt too tipsy to drive; but one of the few things he could do sensibly, when sober, was to handle the reins, and "he drove once in four hours and a-half from Brighton to Carlton House, fifty-six miles."

There was considerable traffic by coach early in the present century from London to Brighton, no fewer than thirty-six vehicles running. The fare was one guinea for an inside and twelve shillings for an outside passenger, and the journey occupied six hours. The total stage-coach traffic, which included that to Windsor, Worthing, Epsom, and other places, was valued at £123,000 a year. Now the London, Brighton and South-Coast Company find their receipts from season-tickets alone greatly exceed this amount, and these receipts have been growing larger, showing an improvement to the extent of about £4,000 a year. In the stage-coach days people crowded to Brighton and Bath and Buxton for health and pleasure; still the passengers travelling by coach between London and Brighton did not number 120,000 a year. When the new line was projected it was modestly thought that double the number of passengers might be carried, and that the receipts would perhaps amount to £156,000. The London, Brighton and South-Coast Railway, which celebrated its jubilee in September, 1891, carried in the previous year nearly forty-four millions of passengers, and derived from this traffic the substantial sum of £1,650,000. The development in goods and

mineral traffic has also been very great considering the character of the county.

In olden time, long before Mr. Ruskin expressed the opinion that English work in iron is masterful of its kind, the sylvan hillsides and glades of Sussex were often bright with furnace fires. There was much burning of charcoal, and many forges and hammers going, and a good deal of real honest English ironwork turned out. The now blackened railings that surround St. Paul's Cathedral are an example of it, for "these railings were cast in the Sussex parish of Lamberhurst, the weight of them being stated at 200 tons, and the cost at £11,000." The great furnaces of the Midlands and the North have flung into their deep recesses the bulk of the home iron trade; and the gleam of the charcoal fire has died out in the South. Still Sussex must have ironware and coal, though she does not produce them; consequently the railway is not without mineral traffic, carrying coal chiefly for household and shipping purposes. There was actually in the second half of 1892 an increase of £12,000 in the revenue from coal and wharves.

No doubt the visitor to Brighton, accustomed to the glowing house-fires of the North, wishes, as he shivers by slack-filled grate at this seaside haunt on a breezy November day, that the quality also of the fuel sent down to the southern shore would improve. The dust and shale that the Yorkshire pitman looks upon as mere rubbish becomes coal at Brighton, and its effort to leap into flame and to give warmth is commendable



THE VIADUCT ACROSS THE PRESTON ROAD, BRIGHTON, IN 1866

but distressing to anyone familiar with the generous heat and bright flame of silkstone. I had whimsical evidence of the difference between a northern and a southern fire three years ago at a Brighton hotel. A north-east wind was blowing across the Channel. Even the wealthy, who drove by the window in seal-skin, fur, and sable, looked sallow or blue with cold. The splendid horsewomen, riding by with grace and skill on some of the best steeds in England, found it difficult to get into a glow; but not so difficult as myself and comrade as we stamped about the coffee-room. "It's a bitter day, sir," said the waiter, going busily to the coalscuttle, which appeared to be filled with black pepper-like powder, and driving the fancy shovel into the composition. "Nah, then, fule, what ahr tha going to do?" exclaimed my companion, a rough diamond who knew more about mining than etiquette. "Sir!" indignantly gasped the waiter. "What's tha get on thi shovel?" asked the rugged heathen. "Coal, sir!" growled the exasperated waiter between his teeth. "Nay, lad, tha must be havin' us," laughed the shaggy-headed deputy, running his fingers through the fuel. "It's nobbut dirt; if tha throws it on t' fire tha'll put it out!" Perhaps the price of coal in London and Brighton will not be so high, and the careful use of it so imperative, when the coalfield that promises so well on the Kentish coast has been opened, and the railways south of the Thames, like the Midland and the North-Eastern, become great carriers of fuel direct from the pit bank.

The projected railway between London and Brighton caused quite a ferment. The sanguine saw the development of a great traffic between the metropolis and Paris, with Brighton as an intermediate Golconda's shore, where the shareholders would easily discover the concealed diamond. Half-a-dozen schemes were broached. Six noted railway engineers were ready with rival tracks, and they all chose different termini in London and at the seaside. "The length of the proposed lines," says one writer, "varied from a maximum of fifty-four miles in the case of Cundy's line to a minimum of forty-seven miles in that of Rennie's. The estimated cost varied from £1,200,000 in the Vignoles system to £800,000 in those of Stephenson and Gibbs; while the time to be occupied constructing the line was placed by Stephenson at two and a-half years, Rennie at three or four years, and Cundy at two years. The amount of excavation and tunnelling required by nearly all the rival schemes was regarded with apprehension, almost amounting to dismay—although, of course, the construction of such a line would now be regarded as a very easy achievement."

Everybody is eloquent nowadays, and there are in Railway Bill time a dozen men to be found in the Committee-rooms of the House who have taken silk, are strong on all questions that relate to new lines, and make princely incomes out of the projects over which they wrangle. But, to quote from the *Times*, "the great forensic lion of that day in the Committee-rooms was

Serjeant Merewether, who tried hard to nonplus the most skilful engineers, and before whom even George Stephenson, excellent witness and wide-awake as he generally was, found it difficult to hold his own. A great point attempted to be made against Stephenson's line by Leatherhead and Dorking was that it passed through a valley liable to heavy fogs. 'Your weak mind,' said the serjeant, addressing Stephenson, 'would be astonished if you heard that the fog there lasted for a week or ten days. Is that a pleasant thing for a railway to pass through?' 'It would be an objection,' said Stephenson; 'but not sufficient to deter you from taking a railway through a country. I should consider the fogs in the neighbourhood of London much more objectionable than they could be in the valley.' 'Then,' said the counsel, 'your conclusion is that, as you must have a London fog at one end, it would be convenient to have a country fog at the other; you would like to have the two termini alike!'

"An attempt was made to prove that Stephenson, senior, who was usually very conscientious in his work, had not examined the route of Rennie's proposed line with sufficient care to be able to give a sound opinion upon it. 'You went down on the top of the coach,' said Merewether to the engineer, 'with three persons in front, with a map and section before you; that was one examination. And the other was in a post-chaise, some part of the time being spent in getting a good luncheon, and you got out of the chaise and walked now and then to increase your appetites all in one day.'

‘Yes,’ replied the engineer curtly,” feeling hot and indignant, as his blood beat quickly beneath his old-fashioned coat and high neckerchief, and thinking that if he only had this impudent barrister in a bit of a pasture for five minutes he could effectually stop his talk with two or three blows such as he dealt Nelson, the miner’s bravo, in Dolly Pit Field, at Callerton, up in the north, years before.

The various competing schemes were ultimately united, and in 1846 the London, Brighton and South Coast Railway Company was formed by an amalgamation of the London and Croydon and the London and Brighton Companies—the two undertakings having a capital of only four millions, and owning only one hundred and sixty miles of line. Now the capital of the company is twenty-five millions, and their lines are between four and five hundred miles in extent. Victoria Station, opened in 1860, and London Bridge, noted rather for its huge signal-box than for any structural beauty, are the London termini; Newhaven is the company’s outlet to the Continent; Brighton has become a crowded suburb of town; and Eastbourne has developed into a watering-place. The line brings you into touch with two famous racing haunts—with aristocratic Goodwood and with more historic and popular Epsom; but there are so many ways and methods of getting to “the Derby” that one is scarcely surprised to find the great meeting does not now hold its original position of importance in the estimation of the company.

In traffic relating to another form of sport, the



THE STEAMSHIP P. PARIS LEAVING NEWHAVEN.

(From a Photograph by Valentine and Sons, Dundee.)

company noted a shrinkage in 1892. Mr. Laing, pointing out that the receipts from the first and second-class passengers to Brighton and other southern watering-places showed a decrease of £6,000, did not attribute the falling-off to any particular fear of the cholera on the Continent, but to the fact that so many were short of money. This affliction, as many meritorious persons know, is always more prevalent than the cholera, but it does not generally visit




THE GREAT OUSE VIADUCT (LONDON AND BRIGHTON LINE) IN 1844.

what Lord Beaconsfield styled "the prosperous middle class." They have lately, however, been touched by the awkward epidemic. They have been obliged to retrench—to be careful in money matters; and as an instance of this imperative thrift, Mr. Laing said their Brighton stationmaster had told him that while in former years he used frequently to have thirty or forty horse-boxes on trains to hunting-meets, in the season of 1892 he had only three or four, showing unmistakably that the sporting squires and hunting city-men had been compelled to economise. No man has a better knowledge of the railway world than the chairman of the Brighton line; and he accurately describes the condition of trade on home tracks when he says that there have been two waves—one of four years of depression or stagnation from 1883 to 1886; the other a six years' flood of increase from 1887 to the autumn of 1892. Since then there has been what may be called "slack water." The depression, thus far, is confined to agriculture and a few other great interests, and the general condition of the country has not been seriously affected. To put the thing in railway language, it is a first- and second-class depression, leaving the third-class almost untouched.

The company claim that their route is the "shortest and the cheapest" to Paris, and they have greatly improved their track at Lewes to give trains a straight run seaward. They have also been building new boats for their cross-Channel traffic, one to take the place of the old *Brighton*, which, in the spring of 1893, collided

with the pier at Dieppe and sank, but has been raised again. One of these new boats, the *Seaford*, collided with the *Lyon* on the 20th of August, 1895, in a heavy fog, and sank in about half-an-hour, but, happily, not a single life was lost, all the passengers being safely transferred to the *Lyon*. For a quarter of a century the Brighton Company and the Western of France Railway Company have been joint-owners of the boats plying between Newhaven and Dieppe, and the agreement was renewed in 1893 with the hope of developing the traffic. Already a continuous stream of human life flows along this course between London and Paris and *vice versâ*. Valuable cargoes, too, are ever passing between city and city. Articles light and dainty, that remind one of Jerrold's "Story of a Feather," consignments of lace rich and rare, wonderful things in bonnets, costly dress fashioned by Worth's art, and a thousand humbler and heavier goods come this way into London.

It is the custom on the Brighton line to give a driver an engine and to let him stick to it. His name is painted inside the footplate shelter or cab; he becomes in some sort the proprietor of the locomotive. He learns its virtues and its failings; he is proud of its speed and steadiness, and lenient to its faults. He takes a pride in the motive giant and keeps it as clean as a pin. He also strives to make good running, for he is frequently reminded that "punctuality is the soul of railway business." The first-class passenger to Brighton, he knows perfectly well, is generally




imperious, and if obliged to brook delay is apt to call the guard, or to demand—especially if he happens to be an Anglo-Indian military officer overheated with curry and chutney and accustomed to somewhat despotic rule—the head of the stationmaster on a salver, consigning the directors meanwhile to a place where the temperature is reputed to be higher than that of the land in which some of Rudyard Kipling's characters pant. The Brighton Company bear this passenger's indignation, scorn, and desperate contempt patiently; and they honestly try to avoid the most tantalising reproach on an English railway, that the train is "behind time." To this end they have been widening the lines between Victoria and Streatham, and at Croydon; and they make, for the freer use of the South-Eastern at Redhill, and in other ways, substantial payments to secure punctuality.

In the spring of 1892 Mr. Laing touched upon the vital point in railway management, remarking that "punctuality was a sore subject with all railway directors and managers. They had nothing whatever to gain by trains being unpunctual, and everything to lose; and yet, as official returns showed, a considerable percentage of trains on all railways failed to keep time. While public opinion required time-tables to be framed according to the quickest times at which trains could be run under ordinary conditions, there were numerous contingencies which often made it impossible to keep those times. These conditions were multiplied with railways like theirs, which had short

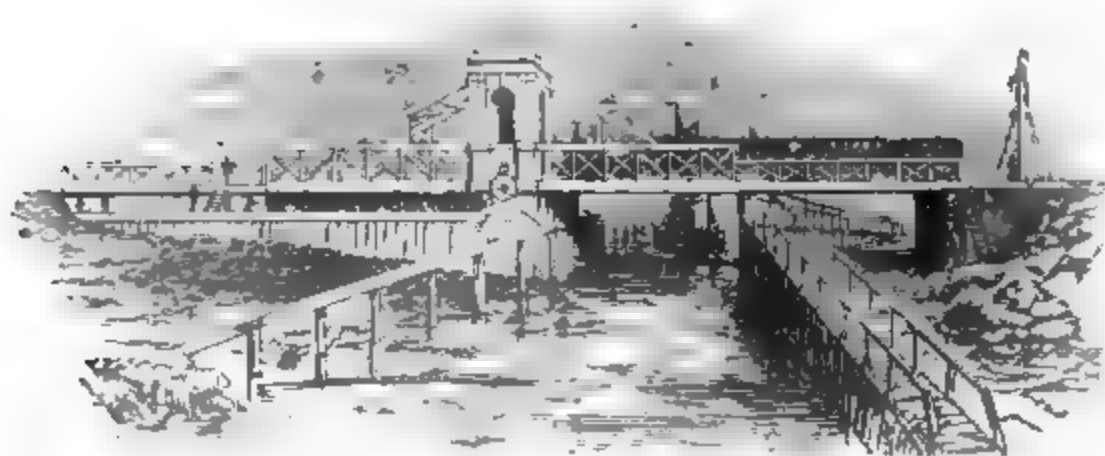
main lines, numerous branches, stations, and junctions, and which for a long distance out of London ran through crowded suburban districts."

It is, I think, the chairman of the Brighton line who has laid it down that this is an age of cheapness, and that to get millions of passengers a company has to give cheap and good accommodation. It is also an age of plain speaking, and the directors have been bluntly told by dissatisfied travellers that they have failed to provide such accommodation, and that their train-speed should be likened to the pace of the tortoise rather than to that of the hare. The directors, in their management, have not, it is asserted, won the merit of the tortoise in the fable. There the hare fell asleep; on this line it is, in the opinion of some passengers, the tortoise that slumbers. One traveller says the directors fell asleep long ago over the traffic. Another maintains that "the Brighton Railway has stood still for thirty years or more, whilst the world around it has moved on." He grasps the system, as it were, with one hand and shakes it up, and asserts that, inasmuch as Brighton is merely a suburb of London, it ought to be demonstrated to the passenger that there is really not more than an hour's ride between the two places.

"Of Mr. Laing's past labours," he adds, "no one in the least conversant with railway history and public service in connection with railways can speak otherwise than with profound respect. Born in 1810, as 'Men of the Time' tells us, Mr. Laing, 'in 1848, accepted the



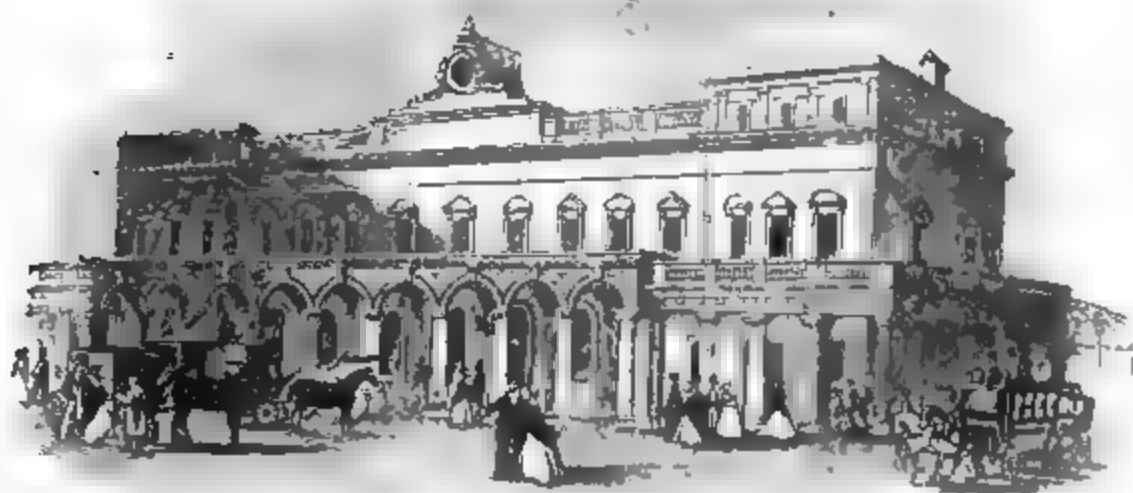
position of managing director of the Brighton Railway Company, and under his administration the passenger traffic of the line was in five years nearly doubled.' In 1855 Mr. Laing retired, and played a busy part in public life, both in England and India, but in 1867 he again 'accepted the post of chairman and managing director, a position he still holds.' The eight other



RAILWAY DRAWBRIDGE OVER THE ARUN (BRIGHTON AND CHICHESTER LINE) IN 1846.

directors include two noble lords and a couple of baronets. Which of the eight is able and willing to do for the Brighton Railway and the public that which Mr. Laing set about and achieved forty-four years ago? Who will double the passenger traffic by giving it reasonable facilities? In all great railways what is wanted is *The Man*. The Great Western found him in Sir Daniel Gooch and Mr. Grierson, under whose *régime* the shares rose from a long way below par to their present high premium; the London and North-Western in Sir Richard Moon and Sir George Findlay; the Great Eastern in Mr. Parkes; the Midland in Sir

James Allport; the Great Northern in Sir Henry Oakley; the South-Eastern and the Metropolitan in Sir Edward Watkin; the London and Chatham in Mr. J. S. Forbes; the London and South-Western in Mr. Ralph Dutton, who has just left us, and in Mr. Scotter*



THE BRIGHTON TERMINUS IN 1844.

—the comparatively new general manager—who has already achieved wonders.

While this critic is yearning for the appearance of another railway Bismarck, it is evident that the public have not lost faith entirely in the Brighton line. No fewer than 46,291,746 passengers travelled on it in 1892, and there was a gratifying increase in the number who availed themselves of the workmen's trains run by the company. In six months more than two millions

* Now Sir Charles Scotter.

of workers in or near London used them ; and the opportunity of cheap journeying, to quote Mr. Laing, "points towards one solution, or, at any rate, mitigation of the social problem of enabling workmen employed in large towns to live with their families in purer air than that of stifling streets and slums."

The dividend announced in January, 1894, was a very satisfactory one, the ordinary stock receiving $7\frac{1}{2}$ per cent. per annum for the preceding half-year, making $6\frac{1}{2}$ for the whole year, while the yield to deferred stock was $5\frac{3}{4}$.

CHAPTER XXIII.

THE CROWD AND LIFE OF LONDON.

London and her Traffic—A Maze of Railways—Workers and Travellers in the Night—Fleet Street towards Dawn—The Rush to Catch the Newspaper Trains—Railway Help to the Postal Service—The Parcel Post—An Enormous Appetite for Packages—Waiting for the Postman—What He will Bring—The Down Night Mail on Christmas Eve—Hard Work in the Sorting Van—A Startling Game of Pitch and Toss: Flinging Out the Mails—Working Under London—The Metropolitan—Electric Railways and City Traffic—Schemes for the Future

THE passenger traffic in and out of London daily is amazing in its bulk; and the number of travellers, whether on suburban journeys, or further away north, south, east, and west, is always increasing. The great city is not only the metropolis—the chief city of the country, but she is practically the mother city of the world, and is ever sending her own or her adopted sons to the ends of it. Babylon, Rome, and Paris become insignificant in contrast to London, with her might, her culture, her ceaseless toil and endeavour, and her enormous wealth. She is the great vigorous heart of a vast empire, and beats day by day to mighty purpose. The railways are her arteries, and along them she sends the life-blood of the nation to work and duty, to striving for riches or fame, to invention, exploration, and trade enterprise—and sometimes in stern necessity to war.

Liverpool with its Overhead Railway has stolen a



march on London; but London, notwithstanding the daily grumble of passengers to and from the City, can show the most remarkable railway development in the world. The great city, which stretches miles any way from St. Paul's, has a population creeping up to six millions, and an area covering more than four hundred square miles. She is served by fifteen railway companies, and has some four hundred stations—a station for every square mile her huge figure dominates. London is intersected and undermined and bridged by lines. The metropolis is one vast network of intercommunication, and without attempting to explain the bewildering puzzle, the marvellous maze of joint powers and working agreements through which the companies conduct their traffic, it is enough to state that there are no fewer than 659 passenger stations in town, “giving each station credit for each company which uses it.”

Mr. Frederick McDermott, in his interesting little book “The Railway System of London,” describes the two circles of railway. “First, there is the underground Inner Circle railway, thirteen miles in length, which forms the centre of the traffic of the metropolis, and then there is the line of communication, *via* the Thames Tunnel, of the East London, which connects the Great Eastern with the Brighton system, and thence to Addison Road and Willesden, and so by the North London back to the Great Eastern system. The same trains do not, of course, traverse this outer circle, but the journey could be made without leaving a station.” London has 405 miles of railway track, and if you reckon the double or



MAP OF THE LONDON RAILWAYS.

treble lines, taking no account whatever of sidings and recent extensions for goods traffic, you will find that there are 750 miles of railway in this vast city's area.

No day passes in London without the bewilderment of some Lancashire man. He goes up to town amazed with his journey and with the city. One of the best stories told of him is that he entered a railway refreshment room, and noting a lady eating an ice, said to the waiter, "Owd lad, tha mun bring me one o' them." Being supplied, he took a spoonful, but spat it out, saying, "Aw reckon it's a bit frostbitten, mester." "Oh no, sir," remarked the waiter imperturbably, "it's an ice." "Ay! do th' ate ice i' London?" asked the wondering operative. "Why, we slur on it i' Rochdale!"

A passenger from the north, says Mr. McDermott, was not long ago overheard reassuring an anxious friend, who had come to wish her "Good-bye," that she was sure to get on all right, as she had only to alight at "London" station. It is odd that these people from the north seldom show their idiosyncrasy till they reach the metropolis; but a Northerner might be forgiven ignorance as to which is really "London" station. When he runs up to town on business or pleasure, he has a general idea that St. Pancras, King's Cross, and Euston are grouped in the same locality, and that he can utilise "the Underground;" but it is doubtful whether he knows much about the Liverpool Street Station of the Great Eastern, or the Paddington Station of the Great Western, or the Waterloo Station of the South-Western, or the Charing Cross Station

of the South-Eastern, or the other large stations that form the sixteen great railway termini of London.

The number of persons who entered the City, on foot and in vehicles, on one day in 1866 was 729,000. The number who entered the City in the same fashion in one day in 1881 was 798,000. The number of passengers alighting at the railway termini in one day in 1881 and on another day in 1891 was as follows:—

			1881.		1891.
Liverpool Street	... (Great Eastern)	...	33,890	...	52,413
Broad Street	... (North London)	...	30,444	...	43,917
Cannon Street	... (South Eastern)	...	21,126	...	27,252
Ludgate Hill	... (Chatham and Dover)	...	18,956	...	16,733
Fenchurch Street	... (London and Tilbury)	...	15,683	...	27,269
Mansion House	... (District)	...	14,774	...	9,453
Moorgate Street	... (Metropolitan)	...	13,422	...	15,950
Aldersgate	... (Metropolitan)	...	9,380	...	14,903
Bishopsgate	... (Metropolitan)	...	9,325	...	13,180
Holborn Viaduct	... (Chatham and Dover)	...	2,852	...	4,706
Snow Hill	... (Chatham and Dover)	...	2,616	...	2,972
Blackfriars	... (District)	...	3,541	...	5,520

Thus the number in 1881 was 186,000. In 1891 the traffic at many of the stations had greatly increased. There were returns, too, from additional Metropolitan stations; and the Electric Railway alone gave a daily traffic of 5,789 passengers. Altogether the number of passengers entering the City in one day in 1891 was nearly 300,000; and as it is reasonable to assume that most of them go home again, early or late, there are 600,000 railway passengers daily on the move in town.

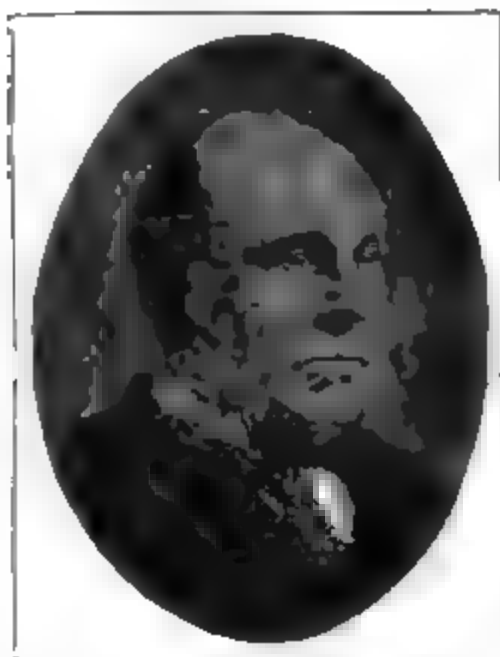
At night the great heart of London does not altogether stop its beating. The season-ticket holder,

who is "something in the City," and rushes with his collar in one hand and his breakfast in the other to catch the morning train, or loftily shows his pass, as he sits taciturn and perhaps a little languid, on his return journey in the evening, has a sort of idea that somebody does work in town at night, that men think and toil long after the theatres are closed and the late sitting in the House has ended; but the fact does not trouble him—his own duty is done or shirked, the working-day, so far as he is concerned, is over, and his thoughts are intent on a pleasant evening in the suburbs, or at his club, or public entertainment, or fashionable crush in the West-end. He may use the train later, perhaps, to bring his wife and children, in sumptuous raiment, to the opera, or he may travel alone, in faultless evening dress, to some political dinner at which the Prime Minister is to be the chief guest; but he does not give much thought to the night-workers, some of whom will probably touch elbows with him in the same compartment. It is true that these men are only a mere handful selected by circumstance of fate out of London's millions to turn night into day, but their work is, in the main, imperative and urgent, conducive to the physical strength and the mental instruction of the people; and their convenience, when they desire to go home at dawn, weary with effort through the night, is not ignored by the railway.

"The announcement," said a writer in the *Daily News* in October, 1891, "recently made to the effect

that the Great Eastern Railway Company were about to run a train from the City to Enfield at fifty minutes past three in the morning, as a preliminary to a continuous service throughout the night, no doubt caused the majority of readers to wonder at the necessity for such a service. We therefore place before them some statistics relating to night-workers, from which it will be seen that large numbers of men leave work at all hours of the night. Taking the Mansion House as our centre, and a radius of about a mile and a-half, there are within this circle employed no fewer than twelve thousand men. It is at night that all the daily papers are produced; the food supply, so far as meat is concerned, distributed; the roads cleansed and repaired, old buildings demolished, and an enormous number of letters despatched to all parts of the country from the General Post Office. From 3 until after 5 a.m., the streets leading to the railway termini are enlivened with the clatter of the carts of the newspaper contributors (chief among whom are Messrs. W. H. Smith and Son) as they dash along with their heavy loads; and waggons laden with meat, vegetables, or other products are to be seen at all hours. The 12,183 night-workers are distributed as follows: First in point of numbers come the City and Metropolitan Police with 5,764 men employed between 10 p.m. and 6 a.m. The meat markets must present an animated appearance with 2,288 men at work, of whom 912 butchers, from 2, 3, and 4 a.m., and 530 porters from 4 a.m., and 136 from 1 a.m., to various

hours, are engaged at the Central Meat Market, 350 butchers and porters from 3 a.m. to 7 a.m. at Spitalfields, and 360 butchers and porters, starting at 1 a.m., and finishing at 8 a.m., at the Borough Market.



MR. W. H. SMITH.

(From a Photograph by A. E. Frodella,
Regent Street, W.)

Newspapers and printing-offices give occupation to 1,082 men, exclusive of the editorial department, from say 5 p.m. to 3 a.m. At the wharves 850 men work from 8 p.m. to 2 a.m. The General Post Office employs 825 (telegraphists and sorters), 350 attending from 12.30 p.m. to 4 a.m., 350 from 4 a.m. to 12.30 p.m., and 125 from 10 p.m. to 5 a.m.

Gas workers and brewers swell the total with 299 (6 p.m. to 5 a.m.) and 239 (8 p.m. to 5 a.m.) respectively. One hundred iron-founders are occasionally at work in Eagle Wharf Road from 8 p.m. to 3 a.m. Sixty sugar refiners, thirty-eight town carmen, and thirty-two stationers leave work at 5, 1, and 2.30 and 2 a.m. Workers at various other occupations aggregate 606, of whom 304 commence at 3 p.m., 222 at 1 a.m., and 80 at 12.30 a.m., ceasing at 2 or 5 a.m., 1 p.m., and 10 a.m.—omitting those who are employed in the public-houses permitted by special licence to open for the convenience of night-workers. No difficulty is experienced

in getting to the City by rail at night, there being the ordinary service up to midnight, and trains arriving at frequent intervals from 3 o'clock. But those leaving work between 12.30 and 2.30 are at present compelled to wait until after 3 o'clock, or to proceed homewards on foot. And although, according to Moore, 'the best of all ways to lengthen one's days is to steal a few hours from the night,' most night-workers no doubt consider theirs sufficiently lengthened when their labour ceases, and will welcome any means placed at their disposal of getting home without a tedious delay or a long and dreary walk."

The newspaper work done in and about Fleet Street appears in bulky shape at dawn. If Sir Richard Steele, after a night of canary, wit, and song, lurched along the narrow, old-fashioned, famous thoroughfare now, he would try to pull himself together and to grasp the meaning of the bustle that suddenly bursts on the silence of the night. The startled cry of wayfarer, the stealthy flight of footpad, the spring of the watchman's rattle, belong to the dead past. The street is instinct with vigorous life. Great vans stand at the curbstones, great heaps of newspapers from the daily paper offices are being flung into the vehicles. There is apparently a wild movement all around, though the seemingly frantic rush is the result of nice calculation and method. Van after van is loaded, and swings away, amid the hoarse shouts of the drivers and the scratch and clatter of the horses' hoofs, to catch the newspaper trains. Mr. Buckle and

Mr. Moberly Bell, the chiefs of the *Times*; Mr. Mudford, the editor of the *Standard*; Sir John Robinson, the managing editor of the *Daily News*; Sir Edwin Arnold, editor of the *Daily Telegraph*; Mr. Massingham, of the *Daily Chronicle*, presuming that they happen to be leaving their offices so late, or rather so early, do not think the commotion singular. The sub-editor, strolling towards the Press Club, or homeward, scarcely regards the hubbub which is the sequel to his night's work; but you perhaps are interested because the competitive rush along this thoroughfare is indicative of the remarkable work the printing machine and the railway can do.

The special train, before the telegraph became such a nimble help to the English press, was occasionally used by the more wealthy and powerful newspapers to convey a staff of reporters to some distant city, and to bring them back again with the statesman's speech written out for the printers. But the special newspaper train, which now conveys the printed paper to the reader, is a comparatively modern institution. Mr. W. H. Smith—late newsvendor, the owner of "Smith's bookstall" at every station, the Lord Chamberlain of the English Press, the seller of tons of railway literature, the Member for the Strand, and the Conservative leader of the House of Commons, who died on October 6, 1891, worth nearly two millions sterling—though he did not run the newspaper train, made it practically a necessity. In the early days of this news vending business his father stole a march



THE NEWSPAPER TRAIN AT EUSTON ON SATURDAY MORNING.

on the ordinary stage-coaches, sending express parcels of newspapers by private coaches into the country, and distributing them hours before the night mails from London were piloted into the old-fashioned inn-yards of our northern cities. Mr. W. H. Smith, at one time more devoted to business than to politics and yachting, developed the undertaking, utilising railway and station boldly and yet shrewdly, till the concern of Messrs. W. H. Smith and Son became a gigantic one, a vast newspaper distributor and spreader of wholesome literature.

“The proprietors of the *Times*,” wrote Mr. Charles Pebody, in “English Journalism, and the Men who have Made It,” “finding, a few years ago, that they were losing ground in the country through the enterprise of their provincial contemporaries, made a bold and determined effort to regain their old position by making arrangements with the railway companies to distribute the *Times* all through the country three hours before any of its rivals could be upon the ground, and thus practically to publish, all over England at least, concurrently with the provincial press. But the monopoly of the newspaper train was soon broken down by the *Daily News*, the *Standard*, and the *Daily Telegraph*; and to-day all the London newspapers are upon a level, and these in their turn are practically upon a level with the newspapers of Birmingham, Leeds, Manchester, Sheffield, Liverpool, and Bristol.”

The struggle to catch the newspaper train at Euston,

King's Cross, or St. Pancras, is, after all, not such an arduous one as that falling nightly to the lot of the conductors of the provincial newspaper. The great London dailies go to press at three or four o'clock in the morning. At that time the night's news from every quarter has come in and been dealt with. The House of Commons (unless there has been a sudden revival of all-night sittings) is in darkness. The news agencies have put aside stylus and flimsy. All sensible reporters are in bed. Even the foreign telegrams have dribbled down to a mere nothing; and the formes are stereotyped and rattled down to the machines, practically as complete in their contents as news-gathering enterprise and careful work can make them.

But in the Midland and Northern cities—where some of the great morning daily papers, such as the *Manchester Guardian*, the *Manchester Courier*, the *Birmingham Daily Post*, the *Liverpool Mercury*, the *Liverpool Daily Post*, the *Leeds Mercury*, the *Yorkshire Post*, the *Scotsman*, and the *Glasgow Herald*, rival the London dailies in excellence of literary matter and scope of news—the same work has to be compressed into half the time. Most of these papers, in order to catch their own special trains—for they run newspaper trains with as free a purse almost as the *Times* do not take copy for their first edition, for their “special train edition,” after quarter to one o'clock at the latest; and have now and then to go to press before the finish of some important political speech has reached the office, or in the middle of some great debate. A page is kept

open till the last moment for the insertion of vital pieces of news, say a division in the House on which the fate of the Government may depend; but the chief of a great northern daily thinks lightly of the death of a potentate, the fall of a dynasty, or a terrible calamity, when the clock strikes one. He has even been heard to say, "Oh, hang Gladstone—we must get to press if there's a revolution!" And at his word the papers are soon being flung off the machines, and hurried away to the stations to the newspaper trains.

The postal system of the country would in these days of imperative demand be helpless without the railway. By its aid the Postmaster-General is enabled to perform what appear to be miracles. In the year ending March, 1894, the number of letters, postcards, book-packets, circulars, samples, newspapers, and parcels sent through the Post Office was 2,796,500,000, and the bulk of this enormous mass of correspondence and material was conveyed by rail. Though the Parcel Post was established as recently as August, 1883, fifty-four millions of parcels are delivered annually by its agency; and the department has already done a great deal towards the expansion of trade and the encouragement of gift-giving. The Parcel Post has become a competitor of the railway. It offers such numerous facilities for sending things away that the railway companies have been thoroughly aroused from their old-fashioned torpor. The Parcel Post, they are well aware, is dependent upon them for long-distance transit; but they look with suspicion

on the official revival of the parcel coaches that ply, with the insignia of the Royal Mail, eight ways out of London, and also between Manchester and Liverpool. So they are anxious for your custom. Perhaps they think even that the next move of the department will be to accept passengers, properly stamped, as parcels.

Certainly you can send almost anything by Parcel Post—flowers in boxes, shrubs and dwarfed trees with their roots encased in canvas matting, fruit in baskets, and game and poultry with neck label. The pneumatic tube has been utilised by the General Post Office for their quicker forwarding; and there is more than mechanical interest in the illustration given on p. 507 of the first despatch of mail-bags from Eversholt Street to Euston. The machine that has made atmospheric air its most obedient servant has for years been a valuable night-messenger in the newspaper office. The pneumatic despatch is no laggard; the swift messenger never loiters by the way.

The railway companies are as eager to get business as the wholesale trader and the shopkeeper. They advertise not only in their time-tables, but on their parcel vans, their drays, on all available walls and gables, and make a brilliant display of colour, in the shape of excursion bills, or placards relating to special train services, at the offices of their agents in every town. They tell you, if your heart inclines to kindness in Christmas week, at what a wonderfully cheap rate you can send a turkey from Lincoln to a friend in

town, or if you live in town, how easy it is to remember your friend in Manchester, Edinburgh, and Glasgow, with some suitable gift. They have a tremendous desire and capacity for parcel carrying. They promise to collect parcels free of charge, to send them in through trains, and to deliver them promptly anywhere; and in the main they fulfil the promise, quickly, though not altogether without mishap, for sometimes the presentation pork pie arrives in a pulp, and the Christmas cake in a crumble, and perhaps you find, on wrenching the lid from the case, that all the wine has been absorbed by the sawdust — that the bottles have broken in pieces like a potter's vessel.

The celerity with which a myriad letters and parcels are transferred from city to city, or to remote country village, or to volunteer camp, seems to be not the least wonderful part of the task performed by the Postmaster-General. "You post a letter or a parcel in London," wrote Sir George Findlay, "say at six o'clock this evening, and to-morrow morning your friend in Carlisle, Edinburgh, or Glasgow finds it on his breakfast table. When one thinks of the many miles between the sender and the receiver, and how long it would once have taken to cover them, this seems almost to resemble a conjurer's feat, and certainly it can only be beaten by electricity itself."

The cheerful glow of fire, the warmth, the comfort, the bounteous table, fail to make the guests in country house happy on Christmas morning till the post-bag



**FIRST DESPATCH OF MAIL-BAGS THROUGH THE PNEUMATIC TUBE FROM EVERSHOLT STREET
TO EUSTON STATION.**

has been brought in, and there is sometimes emphatic grumbling if it is late, the opinion being expressed (whoever is in power) that it is time we had a change of Government, for the postal service is "going to the dogs." In the cramped back-to-back house, in some obscure street in great city, both parents and children rise earlier that morning, and wait impatiently for the postman's knock, and the gifts that Santa Claus may send, having forgotten this year to put them down the chimney; and the little household is in a condition of feverish expectancy of hope, fear, and even petulance till George, the fat postman, comes along with a swing and a lurch, with his great brown bag almost splitting as well as overflowing with letters, his broad back covered with parcels, and his hands full of Christmas cards and toys.

The house party, and the group in lowly cottage, never dream that their grumbling is unjust. They never give a thought to the modern method by which Santa Claus sends his presents rich and rare, or humble and useful. All through the night, while the children were asleep, perhaps dreaming that the familiar fur-clad figure was driving his reindeer team and waggon-load of gifts over the housetops and in at their bedroom windows, the engine-driver, with his fire banked up, with his feet almost frizzling with heat, and his face and beard all frosted just like a real live Father Christmas, has been moving about the foot-plate, now with his hand on the regulator, then on the injector wheel, now with his eye on the steam gauge,

and then peering through the locomotive's spectacles into the darkness of the night, ever on the alert to detect and avoid danger: for it is Christmas Eve. Of all nights in the year there must be no delay, no mishap to-night. He is in charge of the Travelling Post Office Down Night Mail that left Euston to the minute in the teeth of the storm; and in the carriages that come flying after him, and seem in the weird shadows of the night to sway and crouch as if they meant to leap over the tender, there are thousands of letters and packets, containing almost every form of kindly word and every shape of kindly deed, good wishes from pure hearts, delicious bonbons and sweetmeats to eat, bewitching things to wear; and if you could only see inside some of the cases, adroitly packed and sealed and registered, you would—if you happen to be a woman—exclaim in admiration at the flash of diamond and the soft beauteous gleam of opal.

The author does not happen to have travelled by the Down Night Mail on Christmas Eve; but the train, its work, and its journey, were vividly described by a journalist a few years ago:

“It is a long train. First goes the engine, then a brake for the railway company's parcels, then a five-compartment bag-tender, a letter carriage for Aberdeen, three others for Glasgow, another brake full of railway parcels, and a Manchester tender. The actual travelling post-office to-night consists of five letter carriages. These each run upon eight wheels, they are forty-two feet long, and they are all connected into one long saloon by covered gangways between the ends of them. Altogether they form a curious-looking gallery some 170 feet or so from end to end, coloured a bright green and lighted by a double row of gas-

lamps from the roof. One side of the narrow gangway down the middle is hung thickly with empty bags, while on the other are sorting tables backed up with countless pigeon-holes, and, even as the train moves slowly out of Euston on its way to Aberdeen, already overflowing with the contents of the canvas bags which some two-and-twenty sorters are tucking into the pigeon-holes with a busy haste of men who have not a minute to spare. There are folding seats under the tables, but all are too busy to sit down. Work as hard as they will, however, for a long time no appreciable difference seems to be made in the appearance of the place, except that the gangway gets narrower by the continual gorging of the bags.

“By the time we have reached Watford a couple of ‘pouches’ have been made up to heave overboard. Bags are laid down in a thick hide of leather and strapped round with leather bands as stout and strong as the stoutest traces. When the ‘pouch’ is ready, a sliding panel on the near side of the carriage is pushed aside, and the leather-wrapped bags are attached to ‘the apparatus,’ and let down into the darkness, when they go swaying along just above the ground. At the same time by the movement of a lever, like the lever of a railway signal, an iron frame with a stout net stretched under it is swung out from the side of the train at another opening in the carriage, and we stand clear and wait events. On we rush at the rate of perhaps forty miles an hour, the blackness of the night blotting out all landmarks from the inexperienced eye, and nothing being visible but the gaunt arm of the net and the dangling pouches scudding along just over the rushing track and showing up feebly in the light of the carriage lamps. Suddenly there is a bang and a crash; the two pouches have disappeared from below, and almost at the same instant a huge budget shoots out of the net like a thunderbolt, and lies battered on the floor of the carriage. We have exchanged mails with Watford, and in the course of the night our travelling post-office will go through the same little courtesy with four-and-twenty other wayside places, some of the bolts we hurl at each other weighing close upon three-quarters of a hundredweight. At Bletchley, through which we are rushing at something like 50 miles an hour, we get three pouches, one



"PICK-UP" WATER TROUGHS AT WHITMORE, BETWEEN CREWE AND STAFFORD. (Page 612.)

of them, notwithstanding its tough bull hide and heavy leather straps, with the contents of a parcel protruding through its cover. This is the heaviest consignment we take on board, and the train fairly staggers under the concussion.

"Besides the examiner of apparatus, there is an officer on board whose sole duty it is to manage these exchanges of mails, and who on a dark night, and especially on some of the wilds of the north, with the face of the earth perhaps muffled up in snow, has to be preternaturally 'cute to know when to drop his pouches out into the darkness. A little too late and he will miss the net spread out for the catch on shore, and a little too early and he may crash into the platform of some wayside station and knock his mails and his apparatus all to bits. He has to trust to ear more than to eye. He listens for his cue as attentively as an actor on the stage, and knows by the time of his rushing under a bridge, or emerging from a tunnel, or shooting through a cutting, the proper time to drop out his pouches. 'We are just past Wolverton now,' said the examiner at one point, without looking from the train. 'How do you know?' I inquired. 'Don't you hear we are picking up water?' That is a system peculiar to the North-Western. In order to save a stoppage for water they have a trough laid between the metals for a long stretch of the line, as at Whitmore and Wolverton; and as the engine rushes over it a pipe is let down into it, and a supply taken without a moment's slackening of speed.

"Our first stopping-place is Rugby, and by the time we reach that the mails to be put out are all in apple-pie order. I and the chief superintendent get out here, and the train goes ploughing away through the darkness. The men we leave in it have, many of them, been at work at those tables since 4.30 in the afternoon, and they have to go right ahead for some 300 miles from Euston, reaching Preston or Carlisle at 3.45 in the morning. Twenty-four hours after they will go on to Perth, and the third day will work their way back in the mail train to Preston or Carlisle, getting back to London on the fourth day, to have the fifth entirely to themselves at home. This is their regular routine, and there are some forty or fifty travelling post-offices in the kingdom. It is hard work, much more trying than

steady postal work on *terra firma*, but all the hands to-night seem to be working with a will, and when I leave them at Rugby every man seems to be as unrelaxing in his energies as when I first stepped into the train at Euston."

The complexity of modern traffic is scarcely more surprising than the adroit effort required in some districts to place the lines for its transit. The work of the engineers of the Metropolitan Railway, amid the labyrinths of pipes and wires beneath the London streets, has been likened to "the delicacy of a surgical operation." The difficulty of coping with the old Fleet Ditch and its rising tide of filth was enormous. The barricading, the plank pathways over chasms, the everlasting mire, and the intermittent aroma exasperated the dwellers in the New Road to desperation. Sir Edward Watkin was angry, too, at the exorbitant compensation demanded for damaged buildings; and being obliged to maintain one place of worship intact at an absurd cost, sardonically remarked to the shareholders, after admitting that the congregation had obtained a new edifice out of the pockets of the railway company, "I hope, gentlemen, you will be well prayed for—for I assure you, you well deserve it!"

The Underground Railway was originally considered somewhat of a marvel—it is so still in the quality of its atmosphere and the variety of its perfumes—and the people living over it were prepared for some strange surprises, the nervous thinking that area and cellar might collapse, and that house and occupants would fall through on to the line, or that

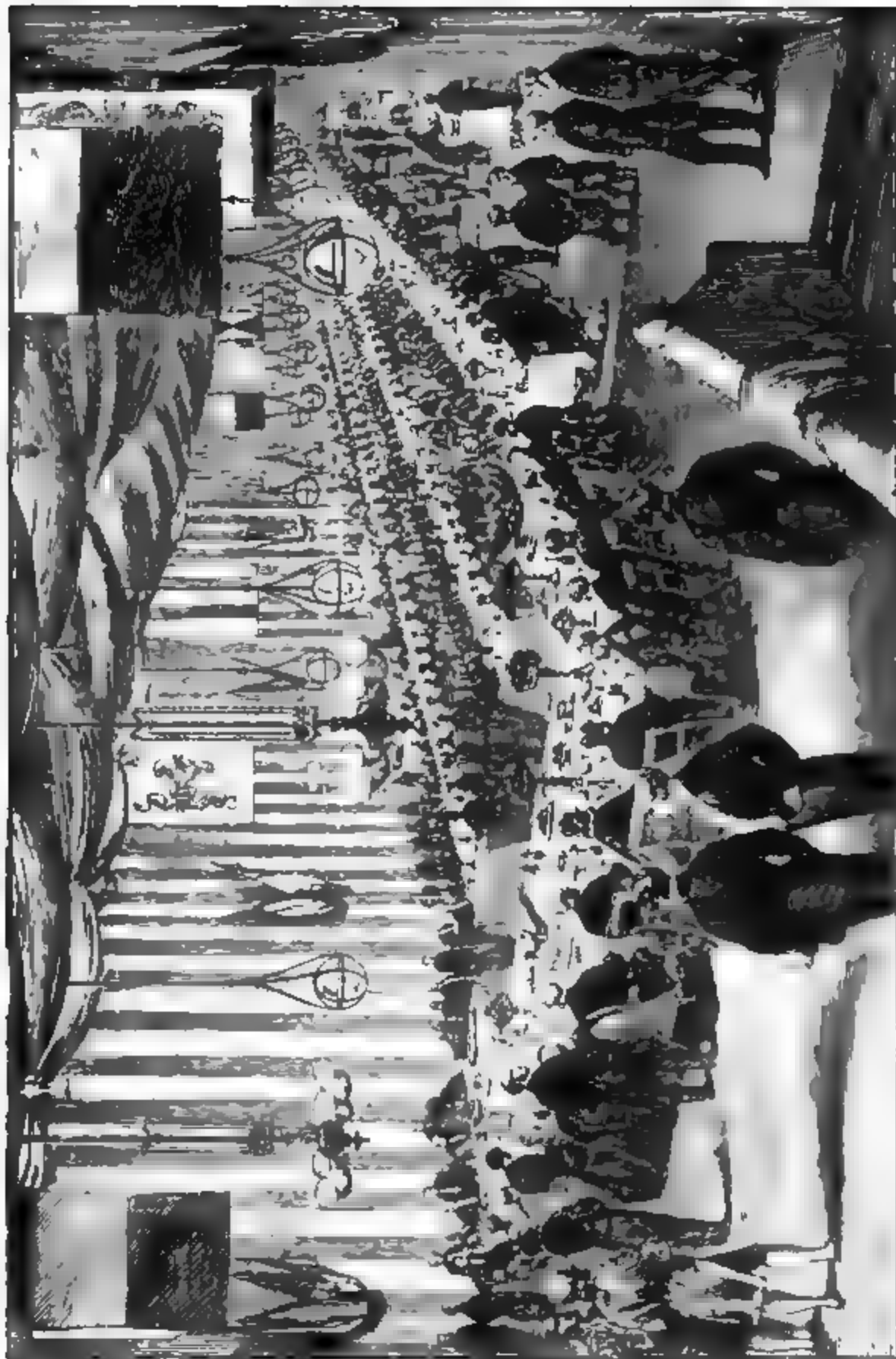
day following, when the line was ready for traffic, 30,000 people journeyed over it. Now it carries ninety millions of passengers a year. The company, though tardy in purifying the atmosphere on the track, have made many improvements in other ways, particularly in rolling-stock and in stations. One of the most important extensions is the subway they have recently driven from their King's Cross station to the Great Northern terminus, and they intend to continue the subterranean way on to St. Pancras, so that passengers who desire on reaching town to travel by "Vulcan's run" may get into the smoke and furnace-like odour without loss of time. The tunnel, which in the early days of railway travel seemed to terrify the passenger, is becoming the popular way; and there seems every probability that the great crowd of London, ever increasing, will do by-and-by most of its travelling underground. Anyhow, no fewer than 12,000 persons passed the new Metropolitan subway the first week it was opened, and in every part of the city business-men are crying out for more subways to relieve the congested traffic.

The Metropolitan, during the second half of 1892, was robbed of many of its customers by the fierce competition of the 'bus companies, and carried 558,000 less passengers than in the same period of the previous year. Yet, owing to the growth of the long-distance traffic, the receipts did not diminish; and there was a notable improvement in the parcels, merchandise, and mineral traffic. Mr. Pochin said at the meeting in January, 1893, that a great many advantages had

come to them from the opening of the line to Aylesbury, and they expected to have a good through mineral service from that extension before long. The dividend for 1893, however, was only $2\frac{7}{8}$, against $3\frac{1}{4}$ in the preceding year.

The rapid growth of London traffic is indicated by the fact that the five great companies have no fewer than twenty-two large goods stations in the metropolis—the London and North-Western and the Midland five each, and the Great Western, Great Northern, and Great Eastern four each. There is every probability of an increase, too, in these big depôts. The Great Eastern, with their compact with the Lancashire and East Coast Railway, will find additional goods and coal station room necessary; and the Manchester, Sheffield and Lincolnshire Company, now that they are getting into London, intend to make a sturdy fight for goods as well as passenger traffic, and to send fish from Grimsby and coal from South Yorkshire to the London market.

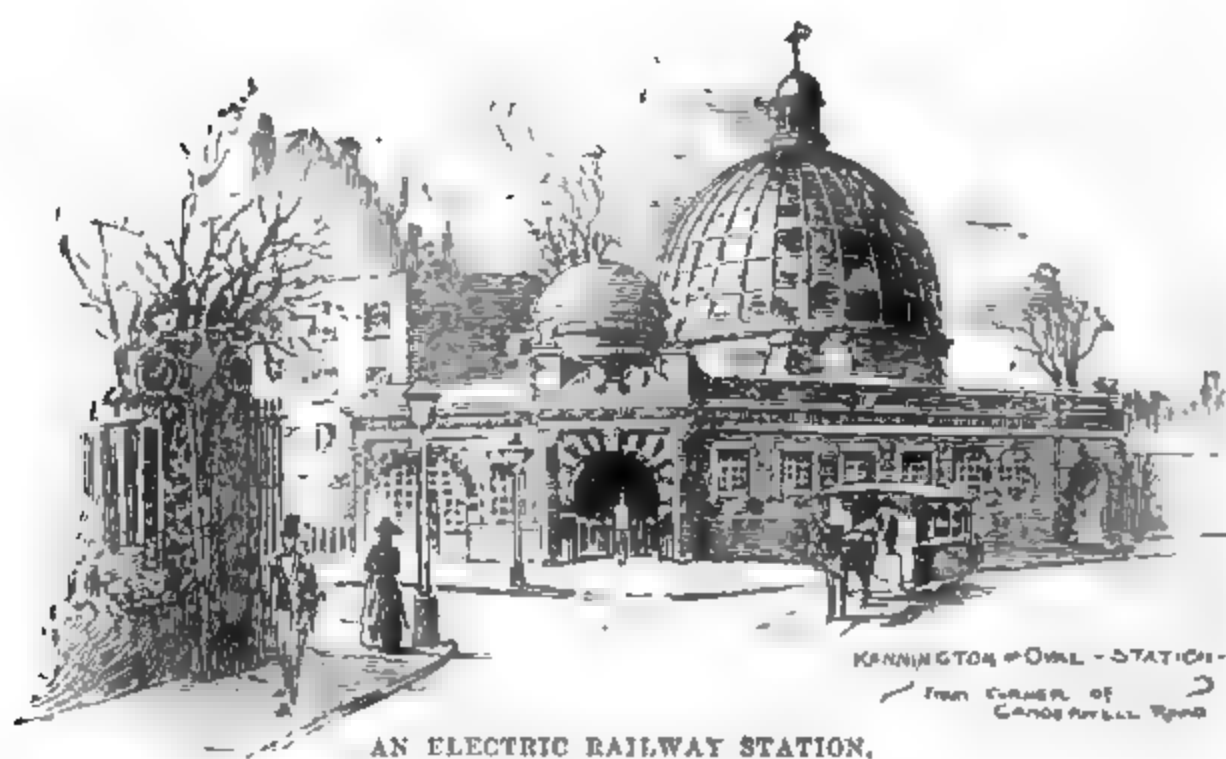
Human ingenuity has for years been striving to apply new motive power to locomotion. The steam-engine is to be superseded. The passenger is to be propelled, like a news-carrier, through a pneumatic tube, or, if he prefers more liberty of travel, Mr. Maxim is prepared to convert him into a flying machine, and he may journey very cheaply, after his first outlay, over land and sea; and if he is a daring traveller, touched with the fever of exploration, there seems no particular reason why he should limit his flight at the



THE BANQUET IN FARRINGDON STREET STATION AT THE OPENING OF THE METROPOLITAN RAILWAY. (Page 514.)

edges of this world. A tour through the solar system may yet become common, and the discovery of a new star in the constellation of Auriga, or some group far more remote, no longer a matter of mere spectroscopic test.

A new motive power has already been applied to



some railways, though Mr. Edison's saying that "Electricity will displace steam" is at present little else than a prophecy. The first line in town worked by electricity was the City and South London Railway, which was opened by the Prince of Wales on November 4, 1890, and to the public on December 18 in the same year. The track extended from the east side of King William Street to Stockwell, and an extension of the line has since been authorised to Clapham Common.

"It is," wrote a passenger on the opening journey, "a real treat to be spared the bother of tickets. Just outside the street door of the booking office are two



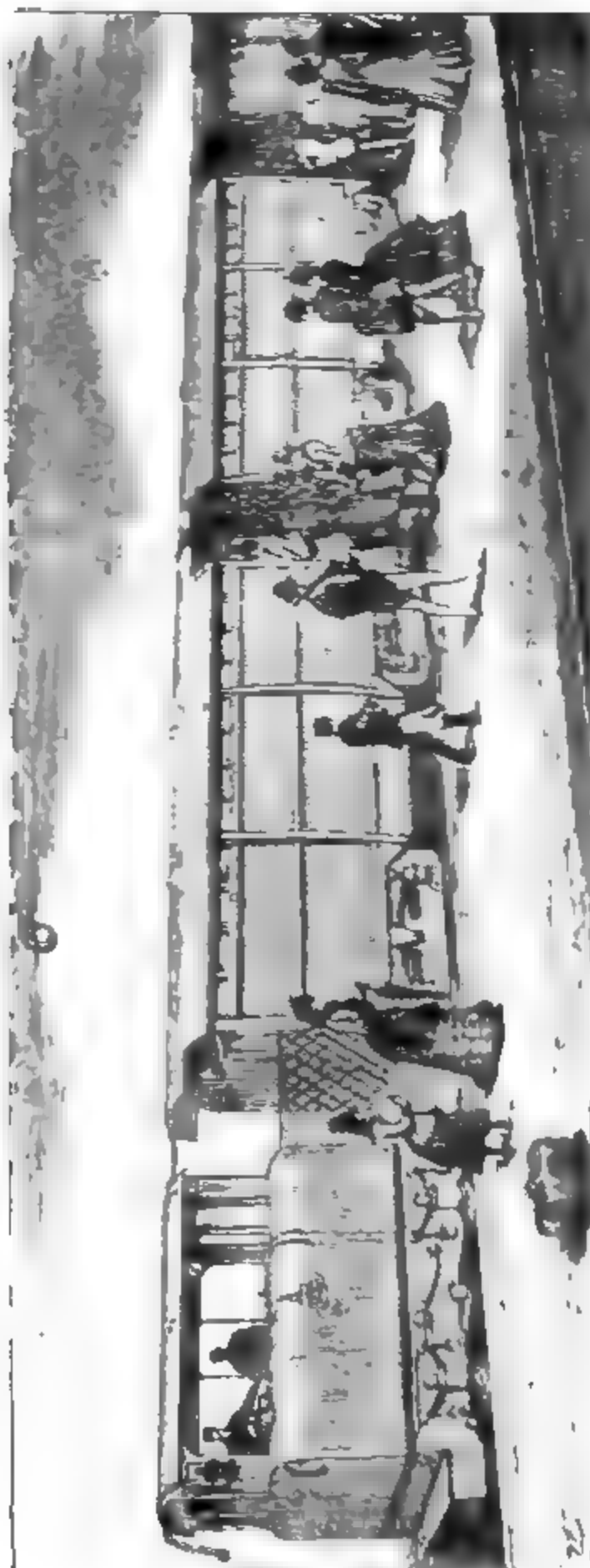
MAP OF THE ELECTRIC RAILWAY.

turnstiles, with a window at each. You pay a uniform fee of twopence to the clerk at the window, and pass through, either to make your way down the spiral staircase or to enter the lift, which is close at hand. Arrived at the bottom, you step out upon the platform, and are

in a well-lighted, warm, and dry tunnel, on the floor of which is a single line of rails. There is very little waiting, as trains run every five minutes, and by-and-by, when the line has been worked up to its normal condition of control (which must always take time), it is hoped to start the trains at two-minute intervals. There need be no difficulty about this, as the up and down lines (a length at present of rather more than three miles) are carried in separate tunnels placed at such a depth under the surface of the roads as to avoid all interference with one another, or with sewers and other underground structures. The comparatively small but ample platform accommodates the waiting passengers, who have at present only the bare white walls and arched roof to gaze upon.

“By-and-by a rumbling is heard: it becomes a roar, and then swells into a rush as the advancing train, emitting electric sparks apparently from the region of the rails, emerges from the black-mouthed tunnel. Each train is composed of three long cars, one of them for smokers. There is no distinction of class, and all alike are comfortable. The atmosphere of the subterranean stations is no doubt somewhat close, but not unpleasantly so. The passengers are shut into their carriages by doors at either end, and the only ventilation is through small apertures over them. Some of the travellers seemed to think that they would not object to a little more air, and in a few instances, through some defect in the connection, the electric lights in the carriages went out

when the train started, leaving the one lamp at either end of a long car as the only remaining means of illumination. This, however, was an accidental occurrence. It should be remembered that, except where the line is underneath the Thames and the adjoining wharf, it passes throughout its entire length underneath the streets, and it thus relieves the great stream of passenger traffic which now passes over London Bridge, between the Borough, Newing-



AN ELECTRIC TRAIN.

ton, and Stockwell;" a relief for which the pedestrian on London Bridge is thankful.

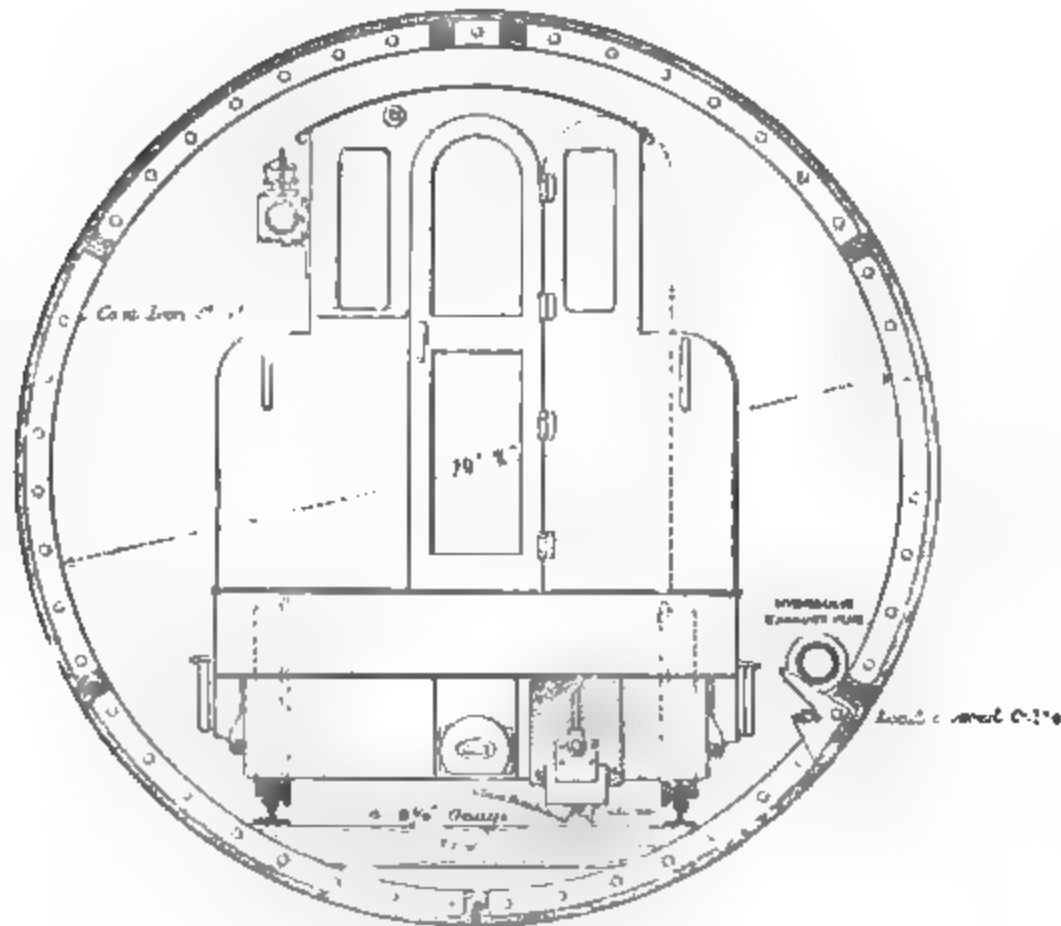
No less than six London Electric Railway Bills were remitted to a Special Committee of the House of Commons in the last session of Lord Salisbury's second administration; and, as an instance of how quickly work may be got through on the threshold of a General Election, it is worth recording that the Great Northern and City Railway Bill was disposed of in two sittings. This railway will cost one million, exclusive of a quarter of a million for hydraulic lifts, electric installation, and plant. The line will run from Drayton Park to Moorgate Street, and have a junction with the lines of the Great Northern. In fact, it is to be constructed so that it may receive the rolling stock of this company. Sir Henry Oakley told the Committee that he should be very glad to send the Great Northern trains through to the City by this line if it could be efficiently worked, for their traffic was exceedingly congested, and they could not carry more over their system than they now took at busy periods. The proposed route, he added, went so directly into the heart of the City, that the new railway must prosper quite apart from the Great Northern. The Metropolitan Railway Company were aggrieved at the project, and said they had endeavoured to ascertain whether their system could be worked by electricity, but the results were unsatisfactory. They complained that it would be unfair to permit the Great Northern to transfer

their traffic from the Metropolitan to the new line, pointing out that the loss would be a very serious one—a fact beyond dispute, inasmuch as the Great Northern send seven million passengers a year over the track.

The Central London Railway Bill also received sanction, and will have a rich field for traffic between Shepherd's Bush and the Mansion House and eastward to Liverpool Street Station. The line, six and a-half miles long, will cost two and a-half millions of money, almost half a million a mile, but its promoters were confident that it would yield a good dividend. So certain are capitalists of the utility of electric railways, that they are prepared to spend on projects already sanctioned, or in "suspended animation," no less a sum than ten millions in London alone.

One of these schemes, however, was abruptly frustrated by a curious objection that never occurred to the promoters when they began their long fight for the Bill. The Clapham Junction and Paddington Railway Bill was rejected, not because of the fear that it would undermine Hyde Park, and perhaps blast the foliage, but because it would cripple the work of a scientific institution! The Professors at the Royal College of Science worked themselves into a great flutter against the Bill. They feared that the railway would cause such vibration, such electrical disturbance, that study would be impossible. They were reminded that the prophecies and

apprehensions of evil and damage made in the early days of railway enterprise had not been realised. They were told by experts "that the mechanical effects on the surface of these underground railways were less

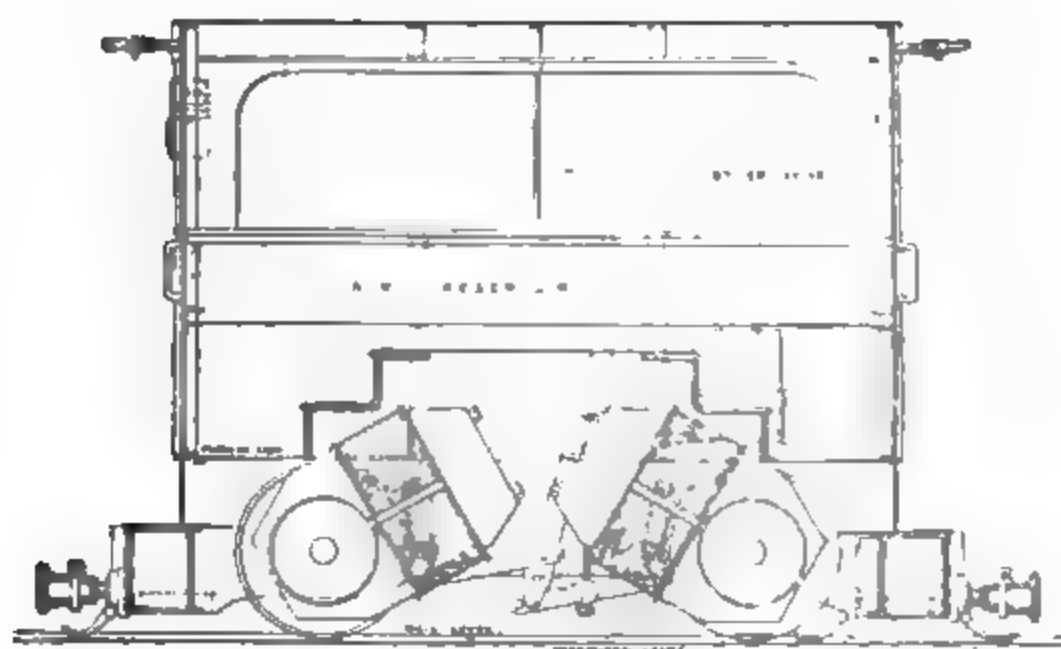


SECTION OF TUNNEL BETWEEN THE "CITY" AND "ELEPHANT AND CASTLE" STATIONS.

than that caused by a person walking across or sneezing in a room;" but they asserted that the "contiguity of the proposed line would certainly have a seriously prejudicial effect on the use of the scientific instruments if the electrical balance was not perfectly maintained," and the Committee found the preamble of the Bill "not proved."

It seems quixotic that a group of professors should

object to a practical application of their own theories and experiments. The plea, though ingenious, is one to which the great city cannot always listen; and some day, impatient with the crush of traffic, she may brusquely say, "Oh, shift the college!" No mere academic obstacle is strong enough to check the loco-

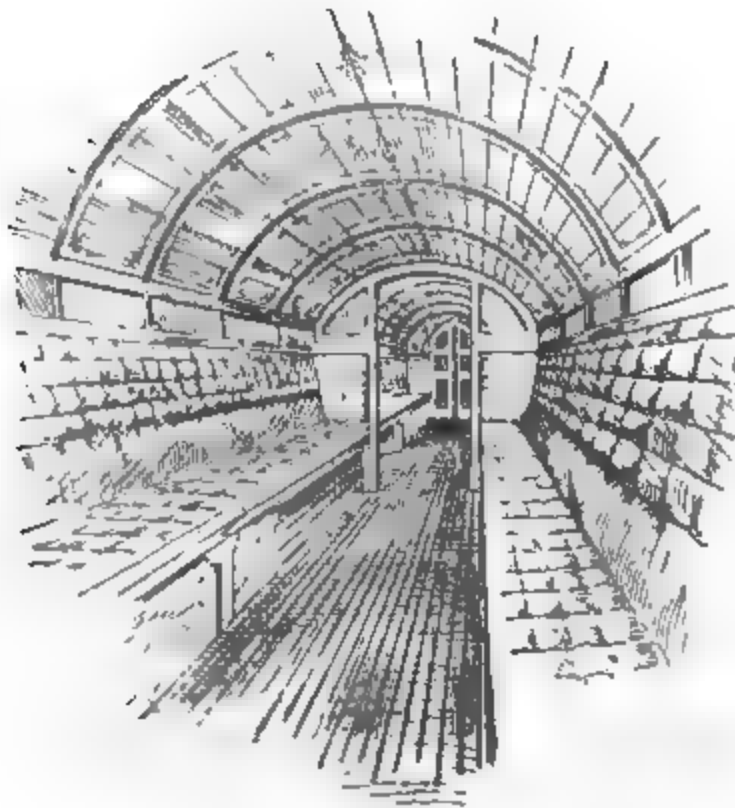


LONGITUDINAL SECTION OF LOCOMOTIVE ON THE CITY AND SOUTH LONDON RAILWAY.

motive's progress in town; and it is not improbable that the Londoner of the next generation will himself be surprised at the maze of underground and overhead ways along which he travels to duty, business, or recreation. In the light of London's street improvement and railway enterprise of to-day, it is interesting to read in the *Times* summary of 1862: "The distress of the cotton trade in Lancashire deprived the Exhibition of at least half a million of its most curious and intelligent visitors. When an enormous crowd

of visitors is again attracted to London, it may be hoped that some relief will have been afforded to the intolerable inconvenience of the crowded thoroughfares. The railway which is to unite the west and north of London with the City is now completed; and the plan of the long-debated Thames Embankment is finally settled."

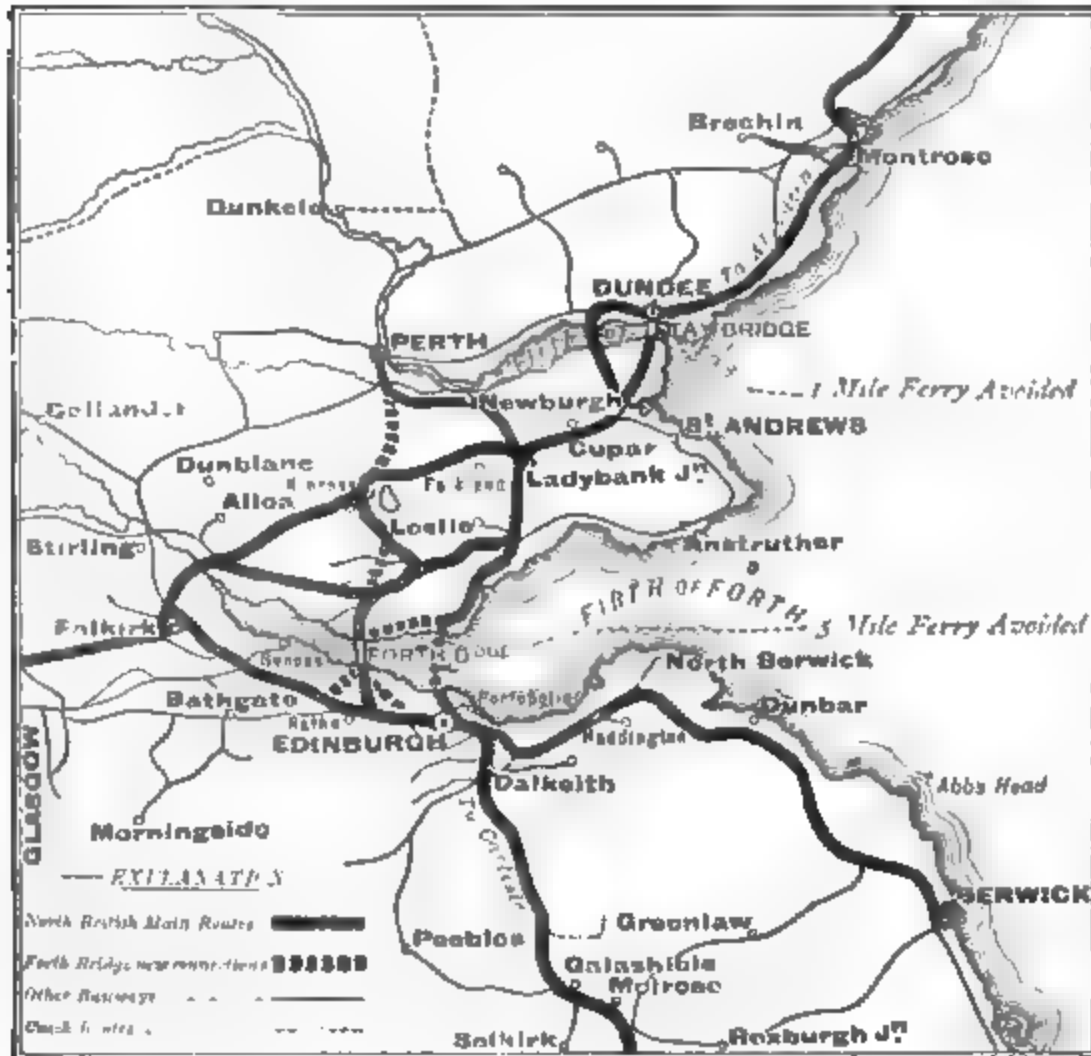
It should be mentioned, before we pass on to our next chapter, that the first electric mountain railway in the United Kingdom was opened in August, 1895, in the Isle of Man. It runs from Laxey to the summit of Snaefell, and will save many a tedious climb up the dreary slopes of the Manx mountain.



INTERIOR OF AN ELECTRIC CAR.

gives such a vivid idea of the rollicking fun of blind man's buff.

The fiction of Sir Walter Scott and of Robert



MAP SHOWING THE CONNECTIONS OF THE FORTH AND TAY BRIDGES.

Louis Stevenson mislead one so far as the present condition of Scotland is concerned. To-day Scotland is a shrewd, sensible country, except on the question of interminable sermons. It retains its worship of the bawbee, and wears trousers. It has abandoned the use of the dirk, and the skirl of the bagpipes is becoming fainter. Just as it is possible to meet a Welshman who has not the slightest knowledge of Welsh, so it is

possible to meet a Scotsman who has no idea of Gaelic, but is pedantic with regard to the pronunciation of English, and indifferent about reels, strathspeys, and tullochgorums. Scotland's chief fault, perhaps, is that she has an "'awfu' guid conceit o' hersel' ;" but she is a land of learning and commerce and manufacture, of industries in jute, oil, sugar, iron, coal, and ships, and Highlander and Lowlander find in some cases that it is more to their advantage to stay at home, steadily working in factory, foundry, and in graving dock, than to go brandishing the claymore in the base land of the Sassenach.

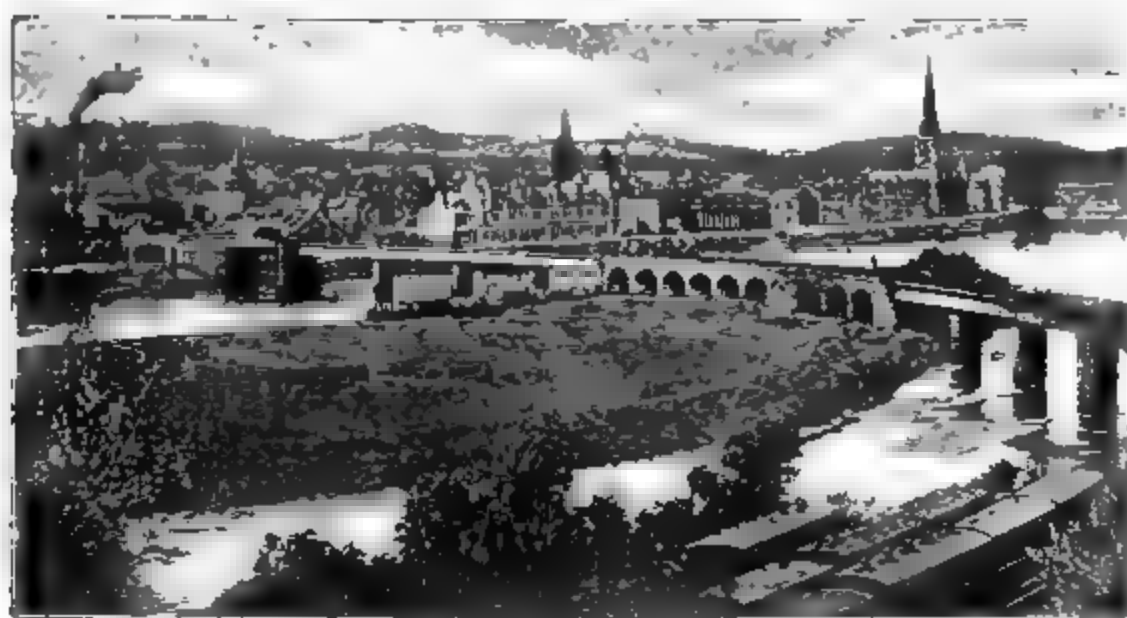
The trade value of Scotland is proved by the eagerness of the great English railway companies to run into the heart of the country. Her scenery and sport, as well as her industries and manufactures, have been converted into profit, and the "Flying Scotsman," on its race to Edinburgh, carries, in addition to the labourer, the artisan, the "commercial," and the trader, the tourist, the salmon angler, the deerstalker. The Scotch railway traffic must be well worth having, for there have been tremendous fights for it ; and the outcome of all the struggling is this—that Donald Dinnie and Maggie M'Intyre, if they decide to indulge not in the Scotch form of marriage, but in a real English runaway match, have the choice of three routes over the border. They can travel to King's Cross by the East Coast route, or to St. Pancras by Carlisle and Settle, or by the West Coast route to Euston. The Great Northern, the Midland, and the London and

North-Western have entered into vigorous rivalry for this Scotch traffic, and engineering skill is put daily almost to its wits' end to catch it. The opening of the Forth Bridge has given the Great Northern the advantage on the East Coast route. The distance from London to Perth on this track is now $441\frac{1}{2}$ miles, by the Midland it is 455 miles, and by the West Coast 450 miles; while from London to Aberdeen by the East Coast route the distance is 523 miles, by the Midland $536\frac{1}{2}$ miles, and by the West Coast route 540 miles.

Every year sees some locomotive of greater power on the line, some acceleration of speed, or economisation of time at station, all with the object of reducing the distance between London and the North of Scotland. In August of 1895 there was a fierce race between the West- and East-coast lines, resulting in a remarkable beating of the record on both routes. Ordinarily the time taken to cover the ground between London and Aberdeen is about ten hours and a half; but in the course of this contest the East-coast journey was accomplished in eight hours forty minutes (523 miles in 520 minutes), while the Euston train did the distance in eight hours thirty-two minutes (540 miles in 512 minutes). After this the racing, by mutual consent, ceased—as well it might; but the North-Western Company were not content until they had further beaten the record by running from Euston to Carlisle without a stop.

The English railways that have forced their rolling stock into Scotland have done so, in the

main, with the consent of, and in agreement with, the Scotch companies. To these companies competition and fierce antagonism are the breath of life; and they have struggled desperately in Parliament, worked their way over the wildest and most rugged tracks, and amalgamated with great English lines



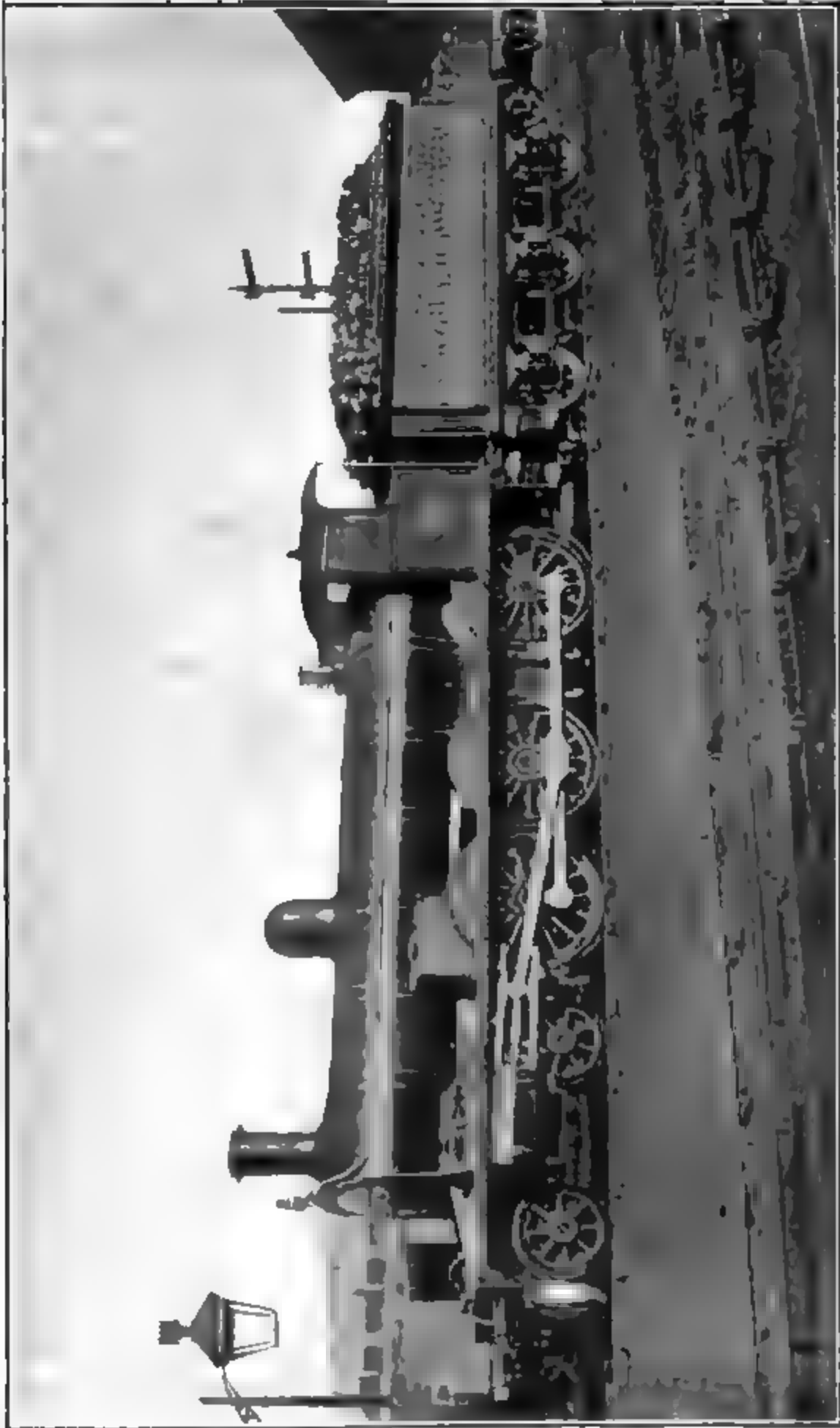
PERTH, FROM THE STATION.

to make through routes and to teach their rivals a lesson.

Out of the hurly-burly practically five railway undertakings have sprung, and stretch their limbs chiefly across the southern part of the country and along its eastern shore, twining the closest, however, about the narrow strip of land that has the great commercial city of Glasgow for its western and the classic city of Edinburgh for its eastern portal. The Highland Railway, striking north-westward from Perth, and then towards Moray Firth, nurses the coast with many a curious turn and twist from Elgin to

Wick, and, curving westward from Dingwall, goes to Strome Ferry. Only a century and a-half ago the rugged land about Dalarossie was sprinkled with armed men. Prince Charles was in retreat, hardly pressed by the Duke of Cumberland. Every student of history knows how the Highlanders fought when the two forces met; how, only six thousand strong, exhausted with fatigue, enervated with scanty ration, broken-spirited, and despairing, they flung themselves with fierce valour on the English soldiery, breaking here and there through the front rank, only to be slain or beaten back by the second line of fire.

It is pleasing proof of modern progress towards the works and ways of peace that on Culloden Moor, which this desperate encounter has made memorable, the navy is busy and the bridge-builder at work, that instead of the chieftain's cry and the wail of the pibroch and the crash of arms, the locomotive's voice, strident enough it may be, will soon be heard as the Highland train rattles along the fine viaduct over the river Nairn and crosses the famous battlefield to Inverness on the new through-line that leaves the old track at Aviemore. Nor is this the only extension. The Highland Railway does a large traffic in sheep, carrying a quarter of a million head per year. It also sends large supplies of fish to Scotch and English cities; but in order to quicken transport to southern markets it has been decided to extend the line from Strome Ferry to Kyle of Lochalsh, and the Government consider this railway link



A HIGHLAND RAILWAY EXPRESS ENGINE (p. 539).
(from a photograph by S. A. Forbes, Perth)

so important that they have agreed to contribute £45,000 towards the making.

The line will be one of the most difficult pieces of railway work on the home system. It will be driven through rock nearly from one end to the other, and the stations will have to be excavated. Like the narrow driving roads in Norway, the track will give the passenger glimpses of bits of scenery both wild and exquisite; but its main purpose is to intercept the West Coast sea-going traffic, particularly the fish traffic from Stornaway; and at Kyle it is intended to construct a deep-water pier that will accommodate vessels at all states of the tide. The Highland Railway seems a long way off if you are glancing down a share list at your broker's office in the City; but it is a line with a good deal of vigour in it. Its express locomotives may challenge comparison with those of any company in Great Britain. The one of which we give a view is 34 ft. 9 in. in length over the buffers, or, including the tender, 58 ft. 4½ in. Its weight, in working order, is fifty-six tons, or, with the tender, ninety-two tons; while the driving-wheels are 5 ft. 3 in. in diameter, and the bogie-wheels 3 ft. 2 in.

Any mention of railway penetration to Ross and Sutherland must include a reference to the late Duke of Sutherland, railway owner and engine-driver, who died on September 22nd, 1892. It is not often that a member of the English aristocracy shows a liking for the footplate of an engine and the smell of railway grease; yet the Duke of Sutherland, who

was among his own people familiarly called "The Iron Duke," because of his interest in railways, had a fancy for both. Nay, it is possible that it was from his grace that the Shah of Persia, who was his guest on his first visit to this country, got the quaint notion that stations are merely "places at which trains stop to have their wheels greased." "The Iron Duke" deserved his title better than did George Hudson that of the "Railway King;" and he was prouder of it than of his peerage titles. When he was young and handsome, as the Marquis of Stafford, Madame de Morny declared that the only "beau garçon Anglais" was "le jeune Stafford;" but with all his grace of bearing he had little hauteur, and made friends with many a toiler. He had ridden with the brigade on the swaying engine to many a great fire in the city; he had gone down many a pit to help after an explosion; he had chatted with many an ironworker on the hot rim of the furnace, and gone day by day to the bedside of an engine-driver who had been nearly scalded to death. The navy is no great respecter of persons. When roused he would thrash an earl as readily as he would maul the village constable; but he had a real respect for the Duke of Sutherland. One "navigator," striking his pick into the bank, and raising his ungainly form to admire his Grace, who was going out of Dunrobin Station with his hand on the regulator, said to his mate, in rough but eloquent words, "There, that's what I call a real dook! Why, there he is

a-driving of his own engine on his own railroad, and a-burning of his own blessed coals !”

“Along with Sir Alexander Matheson and other well-known Highland gentlemen, the Duke of Sutherland,” says the *Scotsman*, “took a prominent part in the extension of the Highland Railway into the Ross-shire system, which terminates at Bonar Bridge. This enterprise was one of great importance, and has led more than anything else to the development of one of the finest agricultural districts in Scotland. The Duke of Sutherland also took a leading share in the construction of the Dingwall and Skye Railway. But it is in the extension of the railway north of Bonar



THE LATE DUKE OF SUTHERLAND.

(Photo: Marshall Ward, Edinburgh.)

Bridge into Sutherland and Caithness that the Duke's public spirit becomes most manifest. He became the principal proprietor of the Sutherland Railway—that is, the railway which runs from Bonar Bridge to Golspie. In that system alone he expended the sum of £94,200. His next great enterprise was one which he undertook entirely at his own expense—the building of what is known as the ‘Duke of Sutherland's Railway,’ which extends from Golspie to Helmsdale. On this undertaking he expended a sum of £72,100. When the Sutherland and Caithness Railway was conceived—that

is, the railway which extends from Helmsdale to Wick on the one hand, and Thurso on the other—he became again the principal proprietor. The sum of money which he expended upon that enterprise was £60,000. In all, on three railway systems—the Sutherland Railway, the Duke's Railway, and the Sutherland and Caithness Railway—the Duke of Sutherland expended the magnificent sum of £226,300. He always drove the engine when he rode over the Highland line. On his own railway he kept his own engine, 'The Dunrobin;' and 'The Dunrobin,' with the Duke on the footboard, was long a familiar figure on the lines to the north of Dunrobin Castle."

The Great North of Scotland does not venture much further south than the town that gave Sir Walter Scott the "Fair Maid of Perth" for a heroine. It winds about the north-eastern corner of the country from Aberdeen to Ballater, from the granite city to Keith, by the Spey to Abernethy, away to lonely Peterhead, and to half-a-dozen places washed by the waters of the North Sea as they surge past Rosehearty. The railway, which is 320 miles long, spreads in the shape of a wind-swept tree over a fertile and picturesque land. The stem stretches from Aberdeen to Elgin, and nearly all the branches are on the north side of it. The company have a capital of over five millions and a half, and an income of £400,000. They carry some three millions of passengers a year, and these include many men with rods and guns, and tourists in Scotch tweeds or Highland costume. They do a good



BEGINNING OF THE GREAT NORTH OF SCOTLAND RAILWAY AT WESTHALL, ABERDEENSHIRE, IN 1852.

trade in live stock and fish. And they also carry much Glenlivet and other whisky. The records of the company do not explain whether it was owing to the influence of "mountain dew," or the persuasiveness of the Highland lassie, that the directors decided to erect their railway works at the place known among men as Kittybrewster. Anyhow, they send out some excellent rolling-stock from their small, overcrowded shops, and are so hampered for elbow-room, that, like the Vikings, they do a good deal of their work in the open air.

There is on some parts of this railway a lingering contempt for the passenger. He is of comparatively little account if the fish train has not gone through; still, he gets more consideration than he did a few years back, when the company were altogether indifferent to junction and extension, and dealt with passengers pretty much as they would deal with a flock of sheep in transit. Many stories are told of the company's despotic treatment of passengers. The management steadily refused to effect a junction with the line to Perth and the south. Though invited to take a share in the construction of the present joint station, and to extend their line into it, they persisted in remaining at Waterloo Station—which is now their goods dépôt—a long way off down the quay, and thither all the passengers for the north had to transfer themselves and their luggage. Not only so, but the Great North train was timed to leave almost immediately after the south mail arrived; and passengers who

failed to get across as quickly as the mail bags, were shut out and relentlessly left behind. On one occasion a director of the company, finding himself locked out with the rest, and refusing to accept his fate with resignation, smashed a window and got in that way.

More consideration is shown for the traveller now. The company have improved some of their stations, and made their track more secure by relaying the line with heavy steel rails. They maintain the satisfactory pace of thirty-five miles an hour, even up to Elgin, and at Aberdeen they welcome you; invite you to stay and refresh yourself in their Palace Hotel, and, almost assuming the character of host, point out that the passenger leaving London at eight o'clock at night has time for a bath and for breakfast before resuming his journey by the morning train to Inverness. It is not surprising, therefore, that traffic is increasing—that the number of third-class passengers has doubled in the past ten years.

The Caledonian Railway is more far-reaching than the Great North of Scotland line. It is shaped something after the fashion of a giraffe. It is nearly all neck and legs, stretching from Carlisle to Edinburgh, to Glasgow, Greenock, and Oban, and then craning itself across the country, and by the East Coast to Aberdeen. The company have a capital of forty-four millions, about 880 miles of permanent way, own the Forth and Clyde Canal, and earn three and a half millions a year. Like the directors of many an English line, they are face to face with the awkward necessity of doing much



OPENING OF THE DUKE OF SUTHERLAND'S RAILWAY TO HELMSDALE IN 1870 (p. 535).

more work for less money than formerly. They made in the spring of 1893 the perplexing discovery that though they had during the previous six months carried two hundred and sixty thousand more passengers, they had received eleven thousand pounds less, and the singular feature of the decrease was that it was chiefly apparent in the third-class traffic, which, according to Scotch railway gospel, should never show diminished receipts, however low the fares and short the journeys. The shareholders had to be content with a slightly reduced dividend; but through the gloom of disappointment came a gleam of hope, for there was a substantial increase in the merchandise and mineral traffic, and the promise of a more flourishing passenger-traffic, especially on the long-distance route, along which, in conjunction with the London and North-Western, the company are running from Euston to Glasgow new West Coast stock that includes dining-cars equal in appointment to any American railroad car. In 1893 the dividend was $4\frac{3}{8}$, against $4\frac{1}{8}$ in 1892.

At the Sheffield colliery, as early as 1776, a tramway was in use, and its rails, made of cast iron, were so constructed that the waggon wheels did not require flanges. What direct bearing this humble railway had upon the English railway system it is impossible to say; but there is no doubt that a similar tramway, in use in 1778, from the Little Govan pits at Glasgow to Springfield by the Clyde-side, was practically the inception of the Scotch railway system. At that time

Glasgow depended upon its historic associations rather than upon its commercial greatness for its importance. The river was narrow and insignificant. The great docks and quays, like the Queen's, Stobcross, and Plantation, had not been built; nor had Telford's fine bridge had its day at the Broomielaw, where a new and wider bridge has become imperatively necessary owing to the crowd of cross-river traffic. The city was not dotted with railway stations. Bridge Street Station, which has now come into the possession of the Caledonian, was unknown, and the Central Station of the same company, with its fine freestone façade, and great hotel, and many arrival and departure stages busy with more than two hundred trains daily, had never been thought of—was not even the most extravagant railway engineer's "castle in the air."

In the *Sheffield Mercury* of December the 9th, 1809, there is a reference to the Scotch railway enterprise of the time: "At Cleland House, much and deservedly regretted, Marton Dalrymple, of Fordel; eminently distinguished for the best qualities both of the head and heart. The great national design of a Rail Road from Glasgow to Berwick, now in contemplation, owed its origin to his ingenuity; and, when carried into execution, it will remain an honourable monument of his enlightened views, his sound judgment, and his indefatigable and persevering activity." Busy and interesting evidence of the development of railway travel was given in 1834, on the Garnkirk line, the track from which



THE CENTRAL STATION OLAROW
(From a Photograph by T. and E. Adams & Son, (London).)

Illustrated, Fine Art, and other Volumes.

- Adventure, The World of.** *Cheap Edition.* Profusely Illustrated with Stirring Pictures and Eighteen Coloured Plates. In Three Vols 5s. each.
- Adventures in Criticism.** By Q (A. T. QUILLER-ROUCH). 6s.
- Aesop's Fables.** Illustrated by ERNEST GRISET. *Cheap Edition.* Cloth, 3s. 6d. ; bevelled boards, gilt edges, 5s.
- Animals, Popular History of.** By HENRY SCHERREN, F.Z.S. With 13 Coloured Plates and other Illustrations. 6s.
- Army Business, The, and its London Office.** By a Colonel in Business. 1s.
- Art, Sacred.** With nearly 200 Full-page Illustrations and Descriptive Text. 9s.
- Art, The Magazine of.** With Exquisite Photogravures, a Series of Full-page Plates, and hundreds of Illustrations. *Yearly Volume*, 21s.
- Artistic Anatomy.** By Prof. M. DUVAL. *Cheap Edition*, 3s. 6d.
- Ballads and Songs.** By WILLIAM MAKEPEACE THACKERAY. With Original Illustrations by H. M. BROCK. 6s.
- Barber, Charles Burton, The Works of.** With Forty-one Plates and Portraits, and Introduction by HARRY FURNISS. *Cheap Edition*, 7s. 6d.
- Berry, D.D., Rev. C. A., Life of.** By the Rev. J. S. DRUMMOND. With Portrait. 6s.
- Biographical Dictionary, Cassell's.** Containing Memoirs of the Most Eminent Men and Women of all Ages and Countries. *Cheap Edition*. 3s. 6d.
- Bird Friends, Our.** By R. KEARTON, F.Z.S. With 100 Illustrations from Photographs by C. KEARTON. 5s.
- Birds, Our Rarer British : Their Nests, Eggs, and Summer Haunts.** By R. KEARTON, F.Z.S. With about 70 Illustrations from Photographs by C. KEARTON. 7s. 6d.
- Birds' Nests, British : How, Where, and When to Find and Identify Them.** By R. KEARTON, F.Z.S. With nearly 130 Illustrations of Nests, Eggs, Young, &c., from Photographs by C. KEARTON. 21s.
- Black Watch, The.** The Record of an Historic Regiment. By ARCHIBALD FORBES, LL.D. 6s.
- Breechloader, The, and How to Use It.** By W. GREENER. 3s. 6d.
- Britain's Roll of Glory ; or, the Victoria Cross, its Heroes, and their Valour.** By D. H. PARRY. Illustrated. *Cheap and Enlarged Edition*. 3s. 6d.
- Britain's Sea Kings and Sea Fights.** With Numerous Original Illustrations. 7s. 6d.
- British Ballads.** With 300 Original Illustrations. *Cheap Edition*. Two Volumes in One. Cloth, 7s. 6d.
- British Battles on Land and Sea.** By JAMES GRANT. With about 800 Illustrations. *Cheap Edition*. Four Vols., 3s. 6d. each.
- Building World.** In Half-Yearly Volumes, 4s. 6d. each.
- Campaign Pictures of the War in South Africa (1899-1900). Letters from the Front.** By A. G. HALES. 6s.
- Canaries and Cage-Birds, The Illustrated Book of.** By W. A. BLAKSTON, W. SWAYSLAND, and A. F. WIENER. With 56 Facsimile Coloured Plates. 35s.
- Cassell's Magazine.** Yearly Volume, 8s. ; Half-Yearly Volume, 5s.
- Cathedrals, Abbeys, and Churches of England and Wales.** Descriptive, Historical, Pictorial. *Popular Edition*. Two Vols., 12s. the set.
- Cats and Kittens.** By HENRIETTE RONNER. With Portrait and 13 magnificent Full-page Photogravure Plates and numerous Illustrations. 4to, £2 10s.
- China Painting.** By FLORENCE LEWIS. With Sixteen Coloured Plates, &c. 5s.
- Chinese Pictures : Notes on Photographs made in China.** By MRS. BISHOP, F.R.G.S. (ISABELLA BIRD). With 60 Illustrations from Photographs by the Author. 3s. 6d.
- Chinese Crisis, The Story of the.** By ALEXIS KRAUSSE. 3s. 6d.
- Choice Dishes at Small Cost.** By A. G. PAYNE. *Cheap Edition*, 1s.
- Chums.** The Illustrated Paper for Boys. Yearly Volume, 8s.
- Civil Service, Guide to Employment in the.** *Entirely New Edition*. Paper, 1s. ; cloth, 1s. 6d.
- Clinical Manuals for Practitioners and Students of Medicine.** (*A List of Volumes forwarded post free on application to the Publishers.*)
- Clyde, Cassell's Guide to the.** Illustrated. Paper covers, 6d. ; cloth, 1s.

The Marquis of Tweeddale has pointed out that the company were obliged to have frequent recourse to the law courts because of exaggerated claims put forward by persons injured by accidents; and he said that juries seemed to be animated by an unaccountable spirit of hostility towards the railway companies, or perhaps they regarded them as possessed of a purse as inexhaustible as that of the fabled Fortunatus. But apart from this almost compulsory defence of their interests in the courts, the North British Company have for years apparently revelled in law. The goddess of fortune herself would have become weary ere now if she had been obliged to pay their bills, to fee the crowds of barristers they have employed, and to defray their parliamentary expenses for protection and invasion of territory. In the first six months of 1891 the company paid no less than £37,000 in parliamentary expenses to keep rival lines out of their district; but their costliest fight has been with the Caledonian Railway Company. The two undertakings, like the Highlander in the late Mr. John Pettie's "Hunted Down," have nearly always been either in the throes of struggle or at bay. They have never relaxed their



THE MARQUIS OF TWEEDDALE.
(From a photograph by W. Crook,
F.R.S.)

grasp of the dirk ; and though they have not managed to kill each other, they have cut down fares and rates so recklessly in their business enmity that the shareholders have growled savagely at the waste of money. One stockholder lately put the case lucidly. They were, he said, tired of the constant fighting, especially as they saw clearly enough that the lawyers got the oyster, and that the Caledonian Company got one shell and the North British the other. The combatants ultimately became sick of the struggle. They took up a position of armed neutrality, and then mutually made proposals for peace, lest the further sapping of strength should prove disastrous to one or both companies. "Everyone knows," said the chairman of the North British Railway Company, speaking in the spring of 1892, "that there has for many years been competition of the keenest description between the North British and Caledonian Companies. Admitting that this competition has not been without advantage in developing our railway systems, it is no less certain that it has operated, more especially of late, in a manner very prejudicial both to the interests of the shareholders and of the public. The business of the companies has been conducted in a wasteful manner. Trains have been run which the public convenience did not require, and many of them were timed in such a way as to ensure the utmost inconvenience possible, due to competition. Capital has been lavishly expended on new or duplicate lines, which could not by any contrivance yield earning power either to

benefit the country or the shareholders. Local requirements of a very pressing kind were very often disregarded, while enormous sums have been expended on parliamentary expenses. In short, competition had passed the bounds of what was sound and healthy, and it became evident that if a change of policy did not soon take place we might have to face evils which as prudent men we should endeavour to avoid."

At that time what was styled a peace agreement had already been concluded between the two companies, to the satisfaction of the shareholders and the concern of the traders. It provided for the cessation of war by an engagement that neither company for twenty-five years should make, or assist in making, new lines in the district served by the other; and for the dividing and sharing of all traffic between competitive stations in equitable proportions. The agreement met with the approval of the chairman of the Caledonian Railway Company, and he held that neither passenger nor trader need feel alarm at it, for the truce "opened the door for arrangements being made without additional cost, probably at some saving of cost, to develop trade to the utmost by interchanging train facilities, by opening junctions for the exchange of traffic, by making return tickets issued for the one line available for return over the other, which was partially done at present by making coast tickets—rail and steamboat—issued over one route available by both lines, and by extending to

traders and season ticket holders the privilege of travelling by either line."

One immediate outcome of the agreement was the concession to the Caledonian Company of access to Loch Lomond, though the North British Company in the two previous sessions had spent thousands of pounds to keep their rival off this profitable tourist track. Another was the reduction of first-class fares over certain portions of the two systems, and the decision to permit the holders of season and of traders' tickets to travel by either line between competitive stations. Both companies, instead of squandering gold in verbal follies, in the legal jargon of clauses, in "aforesaid" and "hereinafter," began to turn their minds to engine shed and carriage-building shop, and to the permanent way.

The Caledonian Company gave out an order for new carriages "sufficiently lofty to enable the tallest passenger to stand erect." The first-class compartments were luxuriously fitted, the woodwork being of bird's-eye maple, the cushions soft and restful, and the panels decorated with mirrors, flanked by photographs of Scottish scenery. The North British Company resolved to overhaul their signalling apparatus, which had long been the scoff of the traveller. Not long ago the driver of a compound engine, pulling an express on the Central Railway of New Jersey at the remarkable speed of ninety-five miles an hour, was naïvely told in his working time-table to look out for a coal train; but this instruction

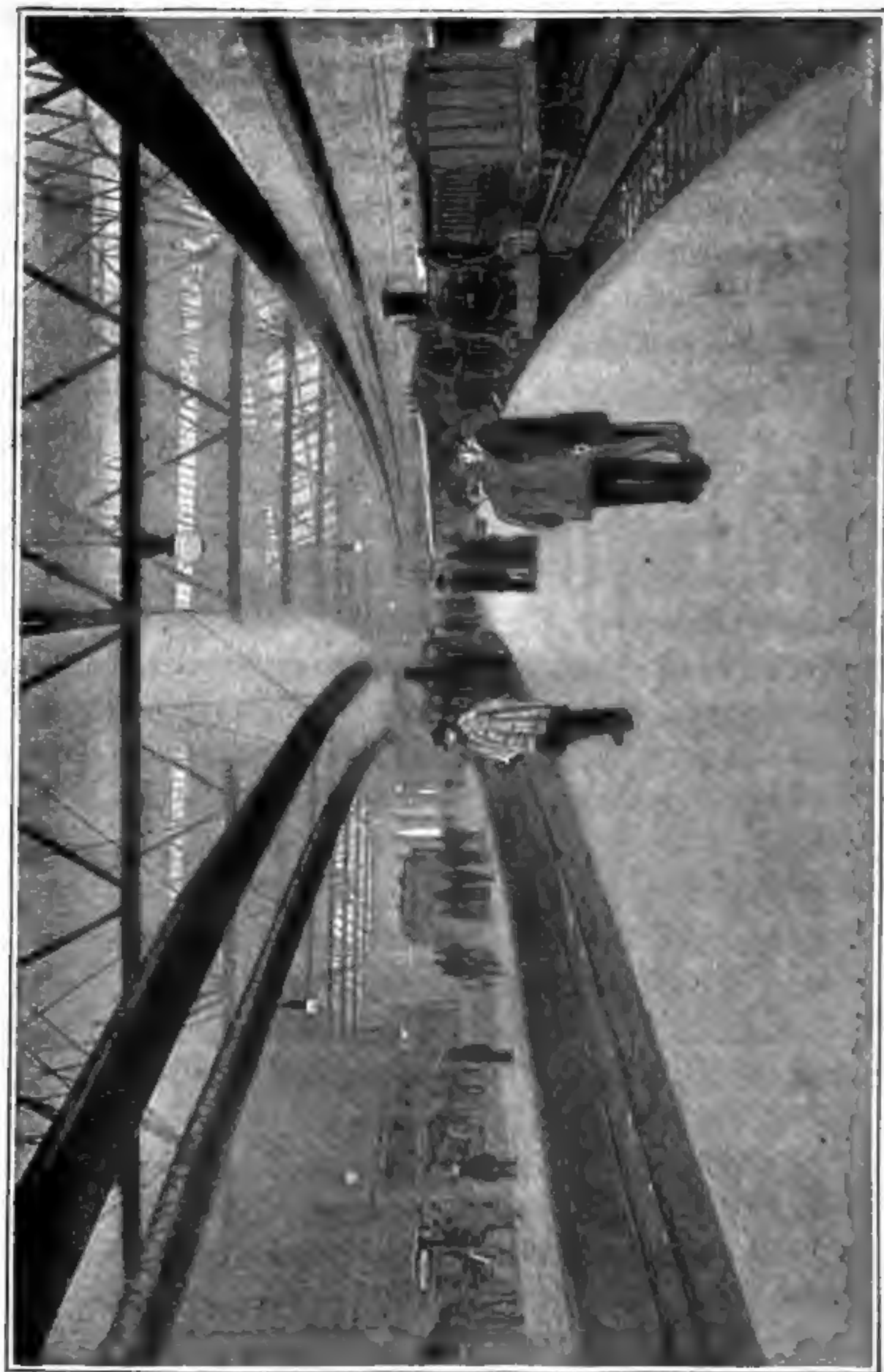
Selections from Cassell & Company's Publications.

- Picturesque Europe. POPULAR EDITION.** In Five Vols. Each containing 13 Litho Plates, and nearly 200 Illustrations. 6s. each. Vols. I. and II., **THE BRITISH ISLES**; Vols. III., IV., and V., **THE CONTINENT**. Vols. I. and II., bound together, are issued at 10s. 6d.
- Picturesque Mediterranean, The.** With a Series of Magnificent Illustrations from Original Designs by leading Artists of the day. Two Vols. Cloth, £2 2s. each.
- Pigeons, Fulton's Book of.** Edited by LEWIS WRIGHT. Revised, Enlarged, and Supplemented by the Rev. W. F. LUMLEY. With 50 Full-page Illustrations. *Popular Edition.* In One Vol., 10s. 6d. *Original Edition*, with 50 Coloured Plates and numerous Wood Engravings, 21s.
- Planet, The Story of Our.** By Prof. BONNEY, F.R.S. With Coloured Plates and Maps and about 100 Illustrations. *Cheap Edition*, 7s. 6d.
- Playfair, Lyon, Memoirs and Correspondence of, First Lord Playfair of St. Andrews.** By Sir WEMYSS REID. With Two Portraits. 7s. 6d.
- Police and Crime, Mysteries of.** A General Survey of Wrong-doing and its Pursuit. By Major ARTHUR GRIFFITHS. Two Vols. 21s.
- Polytechnic Series, The.** Practical Illustrated Manuals. (*A List will be sent on application.*)
- Poultry, The Book of.** By LEWIS WRIGHT. *Popular Edition.* Illustrated. 10s. 6d.
- Poultry, The Illustrated Book of.** By LEWIS WRIGHT. With Fifty Coloured Plates, and numerous Wood Engravings. *New Edition in Preparation.*
- Poultry Keeper, The Practical.** By LEWIS WRIGHT. With Eight Coloured Plates and numerous Illustrations in Text. *New and Enlarged Edition*, 3s. 6d.
- "Punch," The History of.** By M. H. SPIELMANN. With nearly 170 Illustrations, Portraits, and Facsimiles. Cloth, 16s.; *Large Paper Edition*, £2 2s. net.
- Q's Works, Uniform Edition of.** 5s. each.
- | | |
|---|---|
| <ul style="list-style-type: none"> • Dead Man's Rock. • The Splendid Spur. The Delectable Duchy. Stories, Studies, and Sketches. | <ul style="list-style-type: none"> The Astonishing History of Troy Town. "I Saw Three Ships," and other Winter's Tales. Noughts and Crosses. Wandering Heath. |
|---|---|
- * Cheap Illustrated Editions of these Works, 3s. 6d.
- Queen Summer; or, The Tournay of the Lily and the Rose.** Penned and Portrayed by WALTER CRANE. With 40 pages in Colours. 6s.
- Queen Victoria: A Personal Sketch.** By MRS. OLIPHANT. With 3 Rembrandt Plates and Numerous Illustrations. 3s. 6d.
- Queen Victoria: Her Life in Portraits.** 6d. net; cloth, 1s. net.
- Queen Victoria, The Life and Times of.** By ROBERT WILSON. Complete in Two Vols. With numerous Illustrations. 21s.
- Queen's Empire, The.** Containing nearly 700 Splendid Illustrations. Complete in Two Vols. 9s. each.
- Queen's London, The.** Containing Exquisite Views of London and its Environs, together with a fine series of Pictures of the Queen's Diamond Jubilee Procession. *Enlarged Edition*, 10s. 6d.
- Rabbit Keeper, The.** By "CUNICULUS." Illustrated. 3s. 6d.
- Railway Guides, Official.** With Illustrations on nearly every page, Maps, &c. Paper covers, 1s.; cloth, 1s. 6d.
- | | |
|--|--|
| <ul style="list-style-type: none"> London and North Western Railway. Great Western Railway. Midland Railway. Great Northern Railway. | <ul style="list-style-type: none"> Great Eastern Railway. London and South Western Railway. London, Brighton and South Coast Railway. South Eastern & Chatham Railway. |
|--|--|
- Bridged and Popular Editions* of the above Guides can also be obtained. Paper covers, 3d. each.
- Rivers of Great Britain: Descriptive, Historical, Pictorial.**
- Rivers of the South and West Coasts. With Frontispiece and Numerous Illustrations. 42s.
 - The Royal River: The Thames from Source to Sea. *Popular Edition*, 16s.
 - Rivers of the East Coast. With highly finished Engravings. *Popular Edition*, 16s.
- Robinson Crusoe.** *Cassell's Fine-Art Edition.* *Cheap Edition*, 3s. 6d.
- Rogues of the Fiery Cross.** By S. WALKEY. With 16 Full-page Illustrations, 2s. 6d.
- Ronner, Henriette, the Painter of Cat-Life and Cat-Character.** By M. H. SPIELMANN. *Large-paper Edition*, 70s.
- Ruskin, John: A Sketch of his Life, his Work, and his Opinions.** With Personal Reminiscences. By M. H. SPIELMANN. With numerous Portraits and other Illustrations. 5s.
- Russo-Turkish War, Cassell's History of.** With about 400 Illustrations. *New Edition.* In Two Vols., 9s. each.

Cambrian Railways, was appointed to succeed him, and one of his first efforts towards the better management and development of the system was the issue of a circular to the staff, in which he said :

“In the importance of its passenger traffic, the North British Company stands at the head of the railway companies of Scotland, both as regards the number of passengers conveyed and the amount of revenue received ; but in many respects, such as the condition of stations, cleanliness of carriages, smartness of staff, and attention to passengers, I have observed that the service at various places suffers by comparison with the best-managed lines. This state of things cannot but be prejudicial to the interests of the company, and, in the long-run, to those of the company’s servants also, especially having regard to the increasing number of travellers who now visit this country from England. In fact, I know an impression prevails there that there is less willingness to oblige on the part of railway servants in Scotland than in England, although I believe this impression is not the result of any real indisposition north of the Tweed to add as much as possible to the comfort of passengers, nor that it is applicable to the whole of the staff, but rather to the want of a due appreciation of the importance of little civilities and courtesies, even amid the hurry of railway work. I trust, therefore, I shall have the hearty co-operation of all the members of the staff who come into contact with the travelling public in raising the tone of the service to the standard which the importance of the company’s passenger traffic demands, and that agents and inspectors will at once take an increased interest in seeing that station premises are kept clean and in good order, that the men employed upon them keep themselves tidy and smart, that the carriages are thoroughly cleaned both inside and out, and that every man is alert and active when trains are at a station.”

The desire expressed in the manifesto to make Scottish travelling more comfortable is evidently sincere. There is also a very creditable longing to improve the stations in the cities. Half a century ago the style of architecture in this country was



PRINCES STREET STATION, EDINBURGH (p. 544).
(From a Photograph by A. A. Inglis, Edinburgh.)

Selections from Cassell & Company's Publications.

One Shilling Story Books.

A Pair of Primroses.	The Heiress of Wyvern Court.	Their Road to Fortune.
Ella's Golden Year.	Little Queen Mab.	Won by Gentleness.

The World's Workers. A Series of New and Original Volumes by Popular Authors. With Portraits printed on a tint as Frontispiece. 1s. each.

John Cassell. By G. Holden Pike.	Sir Titus Salt and George Moore.
Richard Cobden.	George and Robert Stephenson.
Charles Haddon Spurgeon. By G. Holden Pike.	Charles Dickens.
General Gordon.	Handel.
David Livingstone.	Turner the Artist.
The Earl of Shaftesbury.	Sarah Robinson, Agnes Weston, and Mrs. Meredith.
Dr. Guthrie, Father Mathew, Elihu Burritt, Joseph Livesey.	Mrs. Somerville and Mary Carpenter.
George Müller and Andrew Reed.	<i>At 1s. only.</i>

** * * The above Works can also be had Three in One Vol., cloth, gilt edges, 3s.*

Illustrated Books for the Little Ones. Containing interesting Stories. All Illustrated. 9d. each.

Bright Tales and Funny Pictures.	Bible Pictures for Boys and Girls.	Some Pretty Pets.
Merry Little Tales.	Firelight Stories.	Some Farm Friends.
Little Tales for Little People.	Sunlight and Shade.	Those Golden Sands.
Little People and Their Pets.	Rub-a-dub Tales.	Our Schoolday Hours.
Tales Told for Sunday.	Fine Feathers and Fluffy Fur.	Creatures Tame.
Sunday Stories for Small People.	Scrambles and Scrapes.	Creatures Wild.
Stories and Pictures for Sunday.	Tittle Tattle Tales.	Up and Down the Garden.
The Heir of Elmdale.	Dumb Friends.	All Sorts of Adventures.
Thorns and Tangles.	Surly Bob.	Wandering Ways.
The Cuckoo in the Robin's Nest.	The Giant's Cradle.	The Cost of Revenge.
	Shag and Doll.	Clever Frank.
		The Ferryman of Brill.
		Harry Maxwell.

Cassell's Picture Story Books. Each containing 60 pages. 6d. each.

Auntie's Stories.	A Nest of Stories.	Little Chimes.
Birdie's Story Book.	Good-Night Stories.	A Sheaf of Tales.
Nursery Joys	Chats for Small Chatterers.	Dewdrop Stories.
Pet's Posy.		

Books for the Little Ones. Fully Illustrated.

The Album for Home, School, and Play.	Picture Album of All Sorts. Illustrated.
My Own Album of Animals.	The Chit-Chat Album. Illustrated.
The Sunday Scrap Book. With Several Hundred Illustrations. Boards, 3s. 6d.	The Old Fairy Tales. With Original Illustrations. Cloth, 1s.
Cassell's Robinson Crusoe. With 100 Illustrations. Cloth, 3s. 6d.	Cassell's Swiss Family Robinson. Illustrated. Cloth, 3s. 6d.; gilt edges, 5s.
Cassell's Pictorial Scrap Book. 6d. each.	The New "Little Folks" Painting Book. Containing nearly 350 Outline Illustrations suitable for Colouring. 1s.

**CASSELL & COMPANY, Limited, Ludgate Hill, London;
Paris, New York & Melbourne.**